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Lectures
ON THE
SURGERY OF CHILDHOOD.

DELIVERED AT THE HOSPITAL FOR SICK CHILDREN.

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LECTURE I.

INTRODUCTORY REMARKS; *Plan proposed*; *Arrangement of Surgical Affections of Children*: CONGENITAL MALFORMATIONS; *Atresia Oris*; *Imperforate Anus*; *Imperforate Vagina*; *Hare-Lip*; *Orthopædic Surgery*; *Congenital Fractures and Dislocations*; *Congenital Luxation of the Hip*; *Encephalocele and Meningocele*; *Tumours of Scalp, with Absorption of Cranial Bones.*

GENTLEMEN,—It is, I assure you, with much diffidence that I appear before you to deliver this lecture. Trusting, however, that your kindness and forbearance, as well as the interest and importance of the subject itself, will extenuate some of my deficiencies, I venture to offer to you the following observations on the *Surgery of Childhood.*

It is but a few weeks since, a gentleman at this Hospital asked me what work I could recommend him to read upon this subject; and it was probably to his surprise, as I confess i had originally been to mine, that he learnt that there was really no special book of the kind published. The number of works in various languages devoted to the medical diseases of children is very great, and includes many of the highest excellence; amongst these, I need scarcely refer you to the admirable *Lectures* of Dr. West; but owing, I suppose, to these works having been written almost exclusively by physicians, the surgical affections have received but scanty notice, if any.

After a long search, indeed, I found in Frank's *Delectus* a short Latin treatise by Oehme, *De Morbis recens Natorum Chirurgicis*; but any author who applies to this in the hope of pilfering ideas with impunity, will, I believe, be deservedly disappointed.

The distinction, it is true, between medical and surgical affections, in early life, as at all other ages, cannot be accurately drawn. In many cases which are strictly medical, my assistance is occasionally invoked. In croup, for instance, I have been called on to perform tracheotomy; or for the consequences of pleurisy, to puncture the chest; whilst in all my surgical cases I am ever most glad to avail myself of the ready assistance of my colleagues. Without pretending, however, to logical accuracy, there is practically little difficulty in effecting the separation, in assigning to physicians and to surgeons their respective cases.

The plan which I have sketched out in my own mind is, at present, to offer to you some practical remarks, illustrated with cases, on the surgical affections of children generally, with a hope that, at some future period, I may be able to take up those of the genito-urinary organs, and of the other regions in due succession. But, gentlemen, in the lecture-theatre, as in other theatres, the proposed performances are not always conducted to a successful termination. They require, in fact, the concurrence of the audience, as well as the efforts of the performer; and if it is considered hardly regular, on these boards, to express disapprobation as noisily as elsewhere, it may still be demonstrated more quietly, but as effectually, by your non-attendance.

The surgical affections of children may, I think, be conveniently arranged as follows:—

I. Those CONGENITAL MALFORMATIONS—using the term in a very broad sense, and including arrests of development—which require the attention of the surgeon.

II. The direct or immediate consequences of INJURIES or ACCIDENTS.

III. SURGICAL DISEASES PROPER, which may follow one or other of the previous divisions, or which may arise from other causes.

I.—CONGENITAL MALFORMATIONS.

These are unquestionably special to infancy; and, in the great majority of cases, any surgical treatment which may be applicable is employed at this period of life. With certain exceptions, the malformations which are met with in grown-up people are those which are beyond the reach of our art.

In the good old times, if the malformation reached a certain point, the unhappy subject was christened a "monster", and summarily disposed of, usually by being drowned; and, though Blackstone had pointed out the impropriety of this proceeding, and even laid it down, that "a monster having deformity in any part of its body, yet, if it have human shape, may inherit", the popular impression still remained in many places in favour of what may be termed the heroic treatment. Even as late as 1812, two women were tried at the York Assizes for drowning a child who was born with some malformation of the cranium. There was no attempt at concealment on the part of the prisoners, who did not appear in any way conscious that the act they had committed was either illegal or immoral.

Some malformations require immediate surgical assistance, either to preserve life, or because it can be employed to the best advantage at a very early period. For instance, in certain cases (rare, I confess), in consequence of adhesion of the lips during intrauterine life, the child is born with what is technically called *Atresia Oris*—that is, occlusion of the orifice of the mouth—and, unless a passage to the digestive organs is obtained, nutrition cannot take place and the infant perishes. A still better example—at least, one which is more commonly met with—is, where the other end of the digestive tube is closed, constituting

Imperforate Anus. In this case, as in the previous one, unless an opening be established, life cannot long be sustained; and though the operation not unfrequently fails, or is not even attempted, the results at other times are most favourable. As an illustration, I will detail briefly a successful case of the kind which occurred to me at this Hospital.

CASE. Rebecca Nathan, 23 days old, was brought to me in the summer of last year, with no opening in the usual situation of the anus, the parts there being firm and solid. There was, however, in the posterior wall of the vagina a fistulous orifice, just large enough to admit of the introduction of a probe, through which some fæcal matter exuded. This opening communicated with the rectum, which passed upwards and backwards, being separated from the surface where the anus should have been by soft parts about an inch in thickness. The child was very ill, sick and pining away, straining constantly, and evidently suffering very much from the difficulty in passing the fæces. I determined to operate; and, having passed a probe through the fistula into the bowel, as a guide, I made a free incision through the integuments a little in front of the coccyx, and divided the soft parts until I reached the rectum. This was opened freely, and a large gum elastic tube introduced through the wound into the gut, and secured there. There was no great amount of hæmorrhage; the fæces came away freely; no bad consequences followed; and the child, who throve very well, was brought to me from time to time for some months by the mother, who was supplied with a bougie, which she was instructed to pass frequently. When I saw her last, the little patient's general health was much improved, and a pretty large instrument could be introduced without difficulty.

If the anus is imperforate, and there is no fistula to guide us to the bowel—as there was in the case I have related, or in one described by Mr. Dickinson at Rangoon, where the fæces were passed through the penis (*Lancet*, 1859, page 534)—the case becomes more difficult, the chances of success are much diminished. In the first place, we ought, of course, to explore

the perineal region; if the closure of the anus depends only on the existence of a thin septum, through which, perhaps, the meconium is visible, or if we find a soft and fluctuating tumour which indicates its presence, it is here undoubtedly that we ought to make our incision; the anus should be reestablished in its natural position.

If, however, all these indications are absent, if there are no means of ascertaining to what extent the bowel is deficient or displaced, we may still divide the soft parts in this situation; but the operation will, in all probability, prove unsuccessful. Two other plans, however, present themselves to the surgeon. He may attempt to open the large intestine in the lumbar region by what has been termed Callisen's operation. Theoretically, this is an advantageous situation, for here the bowel may be punctured without the peritoneum being wounded; and in the adult, when an artificial anus is required in consequence of stricture, this operation has been performed with considerable success. In infants, however, the malformation and displacement are frequently not confined to the rectum, the difficulties become much greater, and, practically, I am not aware of many cases where this operation has been of service.

The other plan is, to open the bowel in the groin by Littre's operation. In a remarkable report, read at the Imperial Academy of Medicine, in January of last year, M. Rochard was able to bring forward five cases which had occurred at Brest, where this operation, performed for congenital imperforation, had proved permanently successful, and in which he could trace their progress for many years. One of these cases I may narrate, for it is in the after-results of our operations that the study of surgery is most deficient. An infant had Littre's operation performed on her in 1813. She is still alive; and very recently M. Rochard had an opportunity of examining her. Her digestion is excellent; the stools solid, passed periodically, and, to a certain degree, under the control of the will. When a motion is about to pass, she experiences a feeling of uneasiness and fulness in the left groin. She then removes the compress and body-bandage, which form the whole apparatus that she wears, and replaces them when the bowels have operated. In the intervals, no fæcal matter escapes, but there is a little mucous discharge from the upper bowel. A tumour exists, arising from a prolapse of the lower or anal division of the intestine (this, I may remark, was found in *all* the cases); under pressure, this tumour diminishes in size, but cannot be entirely reduced; there is no tenderness about it, except when diarrhœa is present. The patient is strong and well formed, able, and indeed obliged, to perform hard work. In another of the cases related, the woman married, and had four children, the pregnancy and delivery being, on each occasion, quite normal.

The objections to Littre's operation have been mainly, that the peritoneum must be wounded, and that the artificial anus, if placed in the groin, is a perpetual source of inconvenience and discomfort. It has also been asserted that it necessarily predisposes to hernia. To the first objection, it is fair to answer, that we do not hesitate to wound the peritoneum in operating for hernia; and to the second, that an artificial anus must always be a source of discomfort; but it is, at any rate, more manageable by the patient if placed in the groin, than if situated in the back. As to the alleged tendency to hernia, it is to be remarked, that in not one of these successful cases had any rupture taken place.

The conclusion at which I have arrived for my own part is, that in the next case of imperforate anus I meet with, if there are no indications of the bowel in the perineum, I shall not hesitate to proceed *at once* to form an artifical anus in the groin, rather than exhaust the patient by previous ineffectual attempts to discover the end of the large intestine.* In infants it may be remarked, that the sigmoid flexure is very long, and may be directed transversely into the right iliac fossa, bending back from right to left to enter the pelvic cavity. M. Huguier has consequently suggested that the operation should be performed in the *right* groin. Probably, however, by making the incision rather high up, at the level of, or above the anterior superior spine, the left groin would be preferable, and this appears to have been selected in all M. Rochard's cases.

Imperforate Vagina. An imperforate condition of the vagina is frequently met with, which admits of ready and easy cure. Here the vagina at its orifice is obstructed by the two sides being closely united by a thin membrane, which presents a very small opening at its upper border, allowing the urine to escape. The membrane is placed well in front of the hymen, from which it is totally distinct. No inconvenience is suffered, and perhaps some years may have elapsed before the condition is noticed. At last it attracts the attention of the mother, who becomes alarmed, and is anxious that something should be done. The treatment is simple; a moderately strong probe may be introduced behind the membrane, through the orifice at its upper part; and being curved downwards, may be made to tear its way out, leaving a line of raw surface on each side of the vagina; these sores may then be coated separately with collodion, to prevent their reuniting, and the case requires no further treatment. The sooner this is done the better; if left to a more advanced age, as has been recommended by a writer of eminence, the union becomes much firmer and more difficult to destroy. Mr. Rees relates a case which had been so left, where the adhesion was a quarter of an inch in thickness, and required a troublesome operation for its removal.

Hare-lip. Another class of malformations would consist of those in which, if an operation is not absolutely required at a very early period of life, it is performed with the greatest prospect of success in respect to after deformity; as an example, I may adduce hare-lip. It has indeed been a question here whether surgical interference had not better be deferred till a later period of life; till dentition has been accomplished, or even till that fabulous period when the child has become so sensible of his deformity as to be ready to concur in its removal; but I quite agree with Mr. Butcher in the opinion he gives, in his very excellent remarks on the treatment of this affection, that the operation can scarcely be performed too soon; by the end of the first week of life certainly, and thence to the termination of the third month. Indeed, when complicated with cleft-palate, the immediate cure of the hare-lip not merely favours a spontaneous closure of the fissure of the palate, bnt sometimes offers the only chance of preserving the life of the infant, by enabling it to suck. Two such cases occurred to me here; in one, from certain circumstances, no operation was allowed, and the infant perished of inanition; in the other, I operated for the hare-lip, and the child did well, the cleft palate being left to take its course.

Orthopædic Surgery. It is in the child especially, that orthopædic surgery, as it is called, for the relief of muscular contractions and of the deformities consequent upon them, has most frequently to be employed; and though these contractions are by no means invariably congenital, they are so sufficiently often to warrant my now alluding to them. In these cases, the sooner remedial measures are employed, the more readily is the deformity removed. In fact, the earlier the age of the patient, the more easily will the part affected yield to pressure properly applied; and, in most cases, by appropriate mechanical appliances, even without the use of the knife at all, a perfect and a permanent cure can be effected. We may, indeed, take a lesson perhaps from our celestial brethren (in China), with respect to the great power we possess in moulding or manipulating the infant foot; and if they are able to make it assume the peculiar form which is considered fashionable and proper in their females, so may we, with greater sense, by a similar procedure, relieve deformity and restore the natural form.

Congenital Fractures and Dislocations: Congenital Dislocation of the Hip. Before the child is born, even within its mother's womb, it is liable to fractures and to dislocations, and a correct knowledge of these is always advisable, and frequently indispensable to the surgeon. A little girl, for instance, 10 years of age, was brought to me last year, said to be labouring under disease of the hip, for which she had been duly leeched and blistered, painted with iodine, and drenched with cod-liver oil. She had, in truth, congenital luxation of the left hip-joint, an affection not very uncommon, and of which M. Boyer has collected thirty-two cases. This dislocation, which generally takes place upwards, the head of the femur resting on the dorsum ilii, as it did in the case I have alluded to, frequently occurs on both sides at once, but is occasionally met with on one side only. It may not be noticed at the time of birth, but becomes apparent when the pelvis expands, when the child's movements get more active, when he attempts to assume the upright posture and to run alone. The want of proper support of the body on the extremity, the peculiar unsteadiness in standing or walking, the defect in the proper movements of the hip, and the alternate elevation and depression of the head of the femur in the external iliac fossa begin then to be very evident.

This kind of luxation is said, like defective formations in

* Since this lecture was delivered, I have had occasion to perform Littre's operation on a female infant with imperforate anus. Though the case, which presented some interesting peculiarities, terminated fatally at the end of forty-eight hours, I see no reason to modify the opinion given in the tex The sigmoid flexure was reached and opened without difficulty.

general, to be more frequent in the female than in the male; eleven only out of the thirty-two cases mentioned by Boyer, occurring in boys, to twenty-one in girls; the case too I have related, occurred in a female. It occasionally runs in families or may even be hereditary; it has been seen, for instance, in a mother and her daughter, in two sisters, and M. Sédillot mentions a family in which the mother had a double congenital dislocation, the son a similar dislocation on both sides, whilst the daughter had it only on the left side.

Opportunities of dissecting the parts are, of course, not often met with, the affection not being in itself dangerous, whilst the number of cases in which it occurs is limited. According, however, to M. Pravaz, who has written a special treatise on the subject, the head of the femur may remain free upon the external surface of the ilium, having its movements limited only by the resistance of the soft parts, such as the capsular and accessory ligaments with the surrounding muscles; or, on the other hand, it may be fixed in a false joint. The cotyloid cavity, deserted by the femur, may not be completely obliterated, but only deformed, becoming of an oval or triangular shape, and reduced in its dimensions, *it may still, however, preserve a sufficient capacity, if not to enclose the head of the femur, at least to retain it.* The head of the femur is smaller than natural, and somewhat modified in its form. Its neck is shorter and atrophied, both in length and in circumference. The muscles which unite the thigh to the pelvis are relaxed or extended according to the effect produced upon their length by the displacement of the femur; those which are left relaxed or unused, passing into the state of fatty degeneration.

The congenital luxation is not always complete, especially in the first few years of life; afterwards, the constant action of the limb and the shocks which result from the movements in walking, frequently increase the first degree of displacement; the head of the bone is forced higher and higher on the ilium; it remains in its new position for variable periods of time, and leaves there traces, more or less profound, of the pressure it has exercised.

The diagnosis from the results of hip-joint disease is simple. To translate the words of Dupuytren, "the absence of all pain or inflammatory swelling, of any abscess, sinus, or cicatrix; the simultaneous existence, in some cases, of a dislocation on each side; the history; the first appearance of any sign of the defect on the first step taken by the patient; the progressive development of the symptoms in proportion to the increased weight of the body,—all these are so many certain means of distinguishing the two affections, so analogous in their signs, so different in their origin, their nature, and their treatment."

With respect to the treatment, in most cases, at any rate, it can only be palliative. Baths, friction, and all measures calculated to strengthen the parts around, may be employed; whilst mechanical support is given to the limb by means of an appropriate apparatus embracing the pelvis and receiving and retaining the great trochanters. It is possible that in favourable cases, where the affection is recognised at a very early period of life, when the extent of the changes in the parts is proportionately small, especially, perhaps, when the luxation is double, and the pelvis has consequently remained symmetrical, reduction may be accomplished, a permanent cure effected; at least, M. Pravaz relates some cases in which protracted treatment is said to have terminated in a successful result.

Without feeling much confidence in the chance of a cure, I have been led to dwell at some length on this subject, as the treatment employed upon my patient shows that the affection is not universally recognised.

Encephalocele and Spina Bifida. Even where no operative interference is called for, a correct knowledge of the malformations which may occur, and of their site, is often of great consequence to the practitioner, as it may save him from committing great mistakes, from incurring much just blame. I may refer, by way of illustration, to those congenital malformations of the head and spine which have been termed *encephalocele* and *spina bifida.* In the former (congenital *encephalocele*), usually in consequence of intra-uterine hydrocephalus, when the pressure of the fluid interferes with the development of the bones, and at some particular spot arrests it altogether, we find a tumour of varying size and form, containing a certain amount of the substance of the brain, which protrudes through an aperture in the skull. Sometimes this tumour or hernia of the brain is as large as the proper head itself, or even larger. Generally, however, it is much smaller, and presents a more or less defined neck or pedicle, corresponding to the aperture in the skull. The protruded mass of brain is covered by the pericranium and dura mater, which are somewhat intimately united with each other, and by the other membranes. These coverings, however, are frequently much thinned, and may even give way and burst.

The most common situation in which this protrusion takes place is the occiput, as seen in the cast on the table, as well as in the preparation. Less frequently it is found at the anterior part of the skull, in the fronto-nasal region, or at the front part of the base, protruding into the orbit through the sphenoidal fissure, into the nose through the cribriform plate, or into the pharynx through the sphenoid itself. It has also been found between the occiput and parietal bone, at the top of the head; as well as in the parietal region. Some of these cases were possibly blood-tumours or cephalhæmatomata, rather than encephaloceles. In the museum of Guy's Hospital is a specimen of encephalocele in the parietal region, the protrusion being in connexion with the lateral ventricle. In a table of ninety-three cases collected by Dr. Houel, sixty-eight occurred in the occipital region, sixteen in the fronto-nasal, and nine at the base of the skull.

A very complete and admirable account of this affection was given a year or two back by my friend Mr. Prescott Hewett, in his lectures at the College of Surgeons, which I hope will ere long be published; but my principal object in alluding to them is, to warn you to be upon your guard in meddling surgically with such congenital tumours in the situations I have mentioned, or else you may be disagreeably surprised by finding that you are unintentionally extirpating a part of your patient's brains—a mistake which very able surgeons confess to having committed. M. Lallemand, for instance, relates that he was asked to see a young girl with a tumour situated in the occipital region. Taking it for a wen, he began to remove it; but, he soon found out that he had to do with the dura mater, which was protruding through a hole in the occipital bone. The child died, of course, a few days afterwards, when the tumour was found to contain an elongated portion of the cerebellum. In the third volume of the *Clinique des Hopitaux des Enfants*, you will find related a case of encephalocele in the forehead in a child eight years of age (said, however, to be probably not congenital), which was mistaken at first for an abscess, and punctured; this was followed by head symptoms, when the case was pronounced to be fungus of the dura mater. More incisions were made, and the surgeon tried to cut off the whole tumour; but the operation could not be completed, on account of the hæmorrhage, and the child died. On examination, the tumour was found to be composed of the substance of the brain itself protruding through the dura mater, which was perforated (it had been, we may recollect, extensively wounded), and corresponding to the loss of substance of the bony case of the skull. Dr. Zdzienski, too, relates an interesting case of this kind occurring in the nasal region, where the *écraseur* was applied in 1857, the affection being mistaken for a vascular tumour. The patient, who was between eleven and twelve years of age, of course died. (*Encephaloceles Congenitæ Casus Rarior.* Auctor, Theophilus Zdzienski. 1857.)

Meningocele. Occasionally we meet with analogous protrusions through the skull, consisting, apparently, only of the membranes, forming a pouch containing cerebral fluid, but in which no actual brain-substance has been made out. These have received the name of *meningoceles.* It is possible, however, that even in these cases a portion of the brain really was protruded, but so distended by effusion into its interior, forming so thin a shell of cerebral substance, as to have given way, and rendered its presence difficult to demonstrate, except on careful dissection. Such appears to have been the case in the interesting preparation now on the table. It occurred in an infant I was requested to see before I became connected with this hospital. The tumour, which was congenital and placed at the back of the head, was originally very much larger than you see it now, in consequence of the soft coverings, which at birth were very thin and transparent over a considerable extent, having given way soon afterwards, and allowed the discharge of a turbid fluid, by which the swelling was much diminished. The subsequent immersion in spirit, too, has tended to contract it still further. The child died with convulsions, at the age of about three weeks, when I was enabled to secure the entire head.

The opening by which the tumour communicates with the interior of the skull, and which is about large enough to admit the end of the little finger, is placed to the right side of the central line at the lower and back part of the occipital bone. It is not situated, as has been sometimes stated, at the junction of the four pieces of which the back part of the occiput is said in books to be originally formed, but nearly an

inch below it, between the occipital and condyloid portions of the bone, the circumference of the opening not being entirely osseous, but at its lowest part consisting, for a small extent, only of membrane, which extends to the foramen magnum, from which the hernial aperture is distant about three-quarters of an inch. Through this opening the dura mater can be plainly seen passing, forming the constricted neck of the hernial sac.

Inside the skull, extensive hydrocephalus has been present; the lateral ventricles have been enormously distended with fluid, the brain-substance forming only a thin shell investing the cavities. The cerebrum, however, has no connexion with the tumour, from which it is separated by the tentorium, which appears to have been forced upwards and thinned. On raising this, the cerebellum is seen to have been considerably more distended with fluid than the cerebrum, its nervous matter being hardly thicker than foreign note-paper, but still presenting a laminated appearance, by which it can be recognised. There was no fluid to speak of in the cavity of the arachnoid, or between it and the pia mater; the thin walls of the cerebellum, with its pia mater and visceral arachnoid, being in pretty close apposition with the dura mater and parietal arachnoid, but easily raised or separated from them, except at the neck of the sac, with which they are evidently connected, and into which some portion of the cerebellum can still be traced.

The practical point for us to bear in mind is, to recognise these tumours, to be aware of their nature, in order that we may avoid meddling with them unnecessarily, especially as their existence is not necessarily in all cases a cause of death. M. Lallemand, for instance, found a hernia of the cerebellum in an aged woman at Salpêtrière; and in Dr. Zdzienski's case, already quoted, the patient at the time of operation was about twelve years of age, and in good health. The leading diagnostic marks are—1. The seat of the congenital swelling; 2. Its *pediculated* character; and 3. Its *colour*, which varies according to the position, being natural in the occipital region, where it is covered by the hairy scalp; whilst in front, where the skin is thinner, it may present a reddish or violet hue, giving it a great resemblance to an *erectile tumour*. It is generally soft and fluctuating; usually, but not invariably, reducible to a certain extent; whilst pulsatory movements synchronous with the pulse, as well as with the respiration, are sometimes present, but are very often absent.

The treatment must be principally negative. You must not *excise* the tumour, not yet *incise* it. Moderate pressure with steady support will generally be of service. If there is great tension, you may perhaps evacuate some of the fluid by acupuncture; but injections, whether of iodine or of other substances, are, on the whole, more likely to do harm than good

Tumours of the Scalp, with Absorption of the Cranial Bones. I may be allowed here to introduce a few words respecting another form of tumour of the scalp, which may also communicate with the interior of the skull, but where the bone is perforated in the opposite direction, viz., from without inwards, and which is met with occasionally in children in whom the bone is soft and absorption active. In the museum of the College of Surgeons is a frontal bone with a largish aperture in its middle line. It was sent from abroad to Mr. Prescott Hewett (by whom it was presented to the museum), with, I believe, the following history. The patient had a sebaceous encysted tumour of the forehead. This was removed; but, during the operation, it was found that the frontal bone beneath the tumour had been absorbed, and the dura mater was exposed and injured. Head symptoms followed, and the patient, I presume, died, for the frontal bone is in Lincoln's Inn Fields. Curiously enough, two cases of the same kind came under my care at this hospital within a few months of one another. In these instances, in removing the sebaceous encysted tumour from the middle line of the forehead, I found it placed beneath the occipito-frontalis, and lodged in a well marked cup-like depression in the bone, to the periosteum of which it was adherent, especially at the bottom of the cup, where the union was very firm. On dissecting out the tumours very carefully, I discovered at the lowest part of the depression a small aperture in, or deficiency of, the bone, where the pericranium appeared to be blended with the dura mater beneath.

I have no preparation to show, because in both instances the patient recovered, though a well marked depression was left at the seat of the operation; but I mention the cases to impress upon you the propriety of being careful in excising cysts in this situation in very early life, as you may find the bone deficient, the dura mater unprotected, and a hasty stroke of the knife might wound the membranes, and cause the death of the patient.

Though I have no preparation with *complete* perforation, here is a portion of the os frontis showing a distinct depression or fossa situated just above the orbital arch, towards its outer extremity, in which such a tumour, about the size of a small bean, and congenital in this instance, was placed. The infant dying from other causes, I was able, through the kindness of Dr. Jenner, to examine the parts *in situ*. The tumour was placed beneath the occipito-frontalis, from which it was quite distinct, appearing, when the scalp was stripped off, as a small projection from the bone, surrounded by, or imbedded in, the pericranium. The fossa or depression in which it is lodged is well marked; but the bone in this situation is too thick to admit of any chance of its whole substance being absorbed, or of the dura mater being exposed.

Illustrations of HOSPITAL PRACTICE:

METROPOLITAN AND PROVINCIAL.

WESTMINSTER HOSPITAL.

EXTENSIVE FRACTURE OF THE SKULL, WITH LARGE EFFUSION OF BLOOD BETWEEN THE DURA MATER AND BONE OVER THE RIGHT CEREBRAL HEMISPHERE.

Under the care of C. Holthouse, Esq.

J. L., aged 53, a stout bargeman, was admitted at five o'clock in the morning of November 16th, having fallen down a flight of ten stairs while intoxicated, and then down another flight, striking his head violently against the wall as he fell. This happened at seven o'clock the preceding evening; and he was seen by Mr. Painter's assistant, Mr. Mowatt, an hour after the accident. He was then comatose, and breathing stertorously; and his pupils were contracted. Mr. Mowatt, finding he had been drinking, thought the symptoms might be due to intoxication; but saw him again between four and five in the morning, and finding no amendment, he sent him into the hospital.

The patient was seen by Mr. Holthouse at 10 A.M., when the following symptoms were observed. There was a large ecchymosis involving the right upper eyelid and temple, but none beneath the conjunctiva. There was no wound of the scalp, and no depression or evidence of fracture in any part of the skull. The countenance was dusky. There was no visible distortion of the features. The pupils were somewhat contracted, and immovable; the eyeballs motionless; and winking did not take place on touching the cornea or the eyelashes. The breathing was stertorous; and the pulse was but little affected, and not wanting in power. He vomited once while being examined. There was general paralysis; but it was more complete on the left side of the body, as, on tickling the sole of the left foot, not the slightest movements were produced; while, on tickling the right, the ankle was flexed and the toes extended. These symptoms did not vary materially till he died, at eleven o'clock the following night (the 17th).

Treatment. This consisted in removing the hair from the side of the head, and the application of leeches in the first instance; and afterwards of ice to the head. Sinapisms and hot-water bottles were also applied to the soles of the feet; six grains of calomel were placed on the tongue; and a turpentine enema administered. All these remedies, however, failed to produce any appreciable change in the patient's condition.

Examination of the Body, twenty-four hours after death. Body well nourished; rigor mortis persistent; no marks of decomposition. On separating the scalp from the calvarium, a considerable extravasation of blood occupied the whole of the right side of the head, extending as far forwards as the upper eyelid. On removing the upper half of the skull, it was found unusually adherent to the dura mater; and five ounces and a half of firmly coagulated blood was situated between the bone and dura mater, which was pressed in, and had formed a cavity over the right hemisphere of the brain. The blood did not extend so far forwards internally as it did beneath the scalp, and had not reached any part of the base of the skull. A wide fissure or fracture was found extending from the posterior and

superior part of the right parietal bone (which was here somewhat indented on the inner side), commencing an inch external to the sagittal suture, and passing downwards and forwards a little above the anterior inferior angle of the parietal bone, crossing the coronal suture at right angles, the frontal portion of the frontal bone, and then across the orbital plate of the same bone two-thirds of an inch from the posterior margin of the lesser wing of the sphenoid, and terminating at the optic foramen. The blood had evidently come from the middle meningeal artery, which was torn across, part of the vessel remaining with the skull, and hanging from it, with a long coagulum projecting into and from this vessel. On slicing off a portion of the right hemisphere of the cerebrum, a small recent extravasation of blood was met with in its substance, a little to the outer side of the roof of the lateral ventricle, and midway between the descending and anterior cornua of that cavity; but having no communication with it, or with the clot on the exterior.

REMARKS. The following remarks were made on the case by Mr. Holthouse, at his visit on the morning of the patient's admission. He observed that it was a very grave case, and would, in all probability, prove fatal. The general paralytic condition of the patient, the profound coma, and the stertorous breathing, were symptoms which indicated a very grave lesion of the brain. He felt little doubt that a large quantity of blood was pressing on the right cerebral hemisphere; but whether it was situated between the bone and dura mater, or beneath this membrane, he was unable to say. He judged it to be on the right hemisphere, because the paralysis was more complete on the left than on the right side of the body, as evidenced by the absence of all movements of the toes when the sole of the left foot was tickled; whereas distinct movements took place each time that the sole of the right foot was tickled. He thought it further proved by the ecchymosis beneath the scalp over the right temple, showing that a heavy blow had been given on this side of the head. Was the skull fractured in this situation? It might or it might not be. But there was no evidence to show that it was. The scalp was unbroken; therefore the bone could not be examined; but no depression was felt in any part. Was the *base* of the skull fractured? There was no positive evidence to show that it was, but a good deal of negative evidence to show that it was not. There was no subconjunctival ecchymosis, and no bleeding from the nose, ears, or mouth; nor was any blood mixed with the matters vomited. A fracture of the base, severe enough to produce such symptoms as the present, could hardly exist without revealing itself either by hæmorrhage or local paralysis due to injury of the nerves which pass out of the skull through the several foramina at its base.

The condition of the pupils was then remarked upon, as not according with the common opinion that they are dilated in compression; neither was the pulse slow and labouring, as it is usually described to be in compression.

In some clinical remarks on the case subsequent to the *post mortem* examination, Mr. Holthouse adverted to the signs by which drunkenness might be distinguished from apoplexy, and to the different varieties of the latter, whether idiopathic or traumatic. Attention was also called to the diagnosis of the case made during the patient's life; and it was shown how far this accorded with or differed from what was found after death.

Viewed now by the additional light thrown on the case by the *post mortem* examination, the following would appear to have been what happened. In consequence of the blow or blows received while falling down stairs, the skull was fractured, and the middle meningeal artery lacerated or torn through. The blood, as it flowed from this vessel, would gradually detach the dura mater from the interior of the cranium; and, owing to the resistance it would meet with from the close adhesion of this membrane to the bones, it would tend to arrest the bleeding by its pressure on the torn vessel; while some might make its way outwards through the fissure in the bones, and so insinuate itself beneath the scalp. This, at least, is one way in which the ecchymosis there met with may be accounted for.

With respect to the treatment, the lecturer was of opinion that he ought to have trephined in this case; and he expressed his conviction that both the lancet and the trephine were too little used now-a-days, and that lives were sacrificed in consequence. He did not believe that any good could have resulted from the use of the lancet in the present case. The quantity of blood extravasated was too large to admit of absorption, and the internal hæmorrhage had probably ceased before the patient's admission; but in slighter cases, especially where the seat of the effusion was more doubtful than in the present case, where symptoms of compression were present, and the evidences of depression absent, blood-letting was the most efficacious of remedies. If hæmorrhage were still going on, venesection arrested it; if it had ceased, it promoted the absorption of the blood already poured out.

Original Communications.

ON THE PATHOLOGICAL CONDITIONS AND TREATMENT OF CHRONIC BRONCHITIS.

By HENRY DUNCALFE, Esq., West Bromwich.

[*Read before the Queen's College Medico-Chirurgical Society, Birmingham.*]

ALTHOUGH the pathological conditions giving rise to the disease known as chronic bronchitis will not admit of any arbitrary division, yet I have ventured to classify under three heads those states of the disease which partake to a greater or smaller extent of certain structural changes, and which, while together with their complications they are sufficiently marked to evidence the disease, admit at the same time of such a diversity of character as to require different forms of treatment. This disease is of great importance to ourselves, inasmuch as its consequences are serious, its terminations various, and its complications multiform; and, unless our patients experience some decided benefit, they soon have recourse first, legitimately, to physicians; and, failing to derive benefit at their hands, take the advice of their fellow-sufferers, and content themselves with some of the secret nostrums and certain cures, or get strongly recommended by other officious friends to place themselves under the sheltering wing and fostering care of the homœopath.

It must have occurred to most of us to have experienced the irregular action and uncertain result of remedies employed for the relief of this disease in different individuals. Take, for example, two cases, both having laboured breathing, frequent cough, and copious expectoration—the essential special symptoms diagnostic of chronic bronchitis. We give to these patients a mixture of decoction of senega and sulphuric ether; and we find that, in one case, it acts as a charm, the patient expressing himself in language so emphatic that no one could doubt but that he had found, as he would term it himself, "the best medicine in the world for that complaint"; while, in the other case, the patient may be favoured by circumstances equally good, and perhaps in a position of life capable of affording comforts which were denied to the less favoured sufferer, and notwithstanding this, no good change shall have been effected—neither has the breathing been relieved, nor the paroxysms of coughing suppressed.

With a view to inquire into the causes of such disparity, and with the belief that the disease is capable of a certain classification, I make my communication to the Society this evening.

The first division of cases to which I will direct your attention are characterised by frequent, violent, and protracted paroxysms of coughing, but attended with a slight amount of expectoration; the expectorated fluid being usually clear, thick, and gluey, holding in suspension small, roundish, tough, and greyish pellets, which from time to time become disengaged from the bronchial tubes. The pulse is generally hurried; the skin warm and dry; there is a general tendency to waste, with impaired appetite, and sometimes entire aversion to food; but, from any little irregularity, or exposure to cold, the skin becomes hot, the tongue dry, and patients have a great desire for cold drinks. The expectoration then becomes more copious and frothy; and these acute symptoms do not readily yield to treatment, but gradually diminish in intensity till the disease imperceptibly runs into its ordinary chronic form. "One attack leads, under favourable circumstances, to another. The chronic state is increased, both in extent and virulence, by the supervening of every acute attack; and such frequent revival of the disease tends materially to impede recovery. The disease, when protracted, brings about certain changes of structure, which operate as exciting and sustaining causes of the original affection, implicating other organs, and exhausting that innervation of the respiratory apparatus which is essential to health and life." The breathing is laboured, the expirations

and inspirations being prolonged. If the throat be examined, the soft palate will be found, in the majority of cases, to be relaxed and pendulous; the uvula thickened and pellucid; whilst the posterior wall of the pharynx will be found roughened, and, from the follicles being raised, the membrane will have the appearance of being much thickened; whilst, meandering between the follicles, which sometimes appear whitened or pale from ulceration of their summit, will be seen capillary vessels, highly injected. The chest may be, and often is, well developed; and the sounds elicited both by percussion and auscultation may vary according to the more or less chronic state of the disease, and the alterations of structure which the disease has occasioned. Generally, however, the chest is clear on percussion, with decreased mobility. On applying the ear or stethoscope, the ordinary dry sounds will predominate. The inspirations and expirations will be prolonged; over some portions of the chest, interrupted and whiffing; and in others wanting, or rendered very feeble. There may be an admixture of mucous râles, but not sufficient to destroy these diagnostic characters. In many of these cases, there is a want of nutrition; and, as this condition so often accompanies the onset of phthisis, so that disease may also be diagnosed when it does not exist. A lady, lately under my care, had suffered with the symptoms just enumerated, but without any organic lesion or structural change to enable me to assign any other than chronic bronchitis. Certainly there was a disparity at the posterior part of the upper portions of the two lungs, but not more than a dilated bronchial tube would account for. I ventured to give a favourable opinion of the case, notwithstanding the tendency to waste; and she passed into the care of a neighbouring physician, who ventured to give an equally unfavourable one. She was recommended to pass the winter on the south coast, and has lately returned, improved in condition.

Dr. C. J. B. Williams, speaking of the structural changes in the air-tubes, says:—

"When a case presents itself in which there has been cough, long continued, with expectoration, dyspnœa, loss of strength and flesh, hectic fever, and even some of the physical signs of cavities in the lungs, the practitioner should be cautious in pronouncing it to be tubercular, if it be qualified by all or most of the following conditions:—if no proofs of a scrofulous habit can be traced; if the complaint have originated in a long continued and violent cough, or in an attack of pleuro-pneumonia, and, considering its duration, emaciation have not proceeded far; if the purulent expectoration have been fœtid and sanious, rather than flocculent or caseous; if the bronchial or cavernous respiration or voice be heard rather in the middle than in the upper portions of the chest, and be there spread over a considerable extent of surface; if these middle portions chiefly sound differently on percussion, being dull when the rest of the side sounds pretty well, or amphoric when the side is generally dull and contracted; and if, although the cough and expectoration continue undiminished, these signs remain stationary for many weeks together. In such a case, the strong probability is in favour of its being one of dilated bronchi, and not phthisis."

The obstruction offered to the exit of air from the lungs will sometimes cause it to be driven back by its own resiliency through the ramifications of the bronchial tubes, thereby distending the air-cells, and impairing the elasticity of the lung-tissue, sometimes causing rupture of the cell-walls, and producing emphysema in patches. Such a condition will account for the absence or feebleness of the respiratory murmur, as previously mentioned; and the inability of the lung-cells to empty themselves may, I think, account for a very peculiar sound sometimes heard during inspiration. To this character I particularly direct your attention, as several of my medical friends have expressed themselves as being unacquainted with it. The sound during inspiration more resembles that produced upon applying a sea-shell to the ear than to anything else to which I can compare it. I have known phthisis supervene in two cases where this peculiar breathing was well marked; but as it is not a very common condition, my experience is too limited to say whether it is confined to such cases or to other forms of the disease.

When bronchitis is marked by the predominance of symptoms mentioned in this division, patients will be mostly benefited by such medicines as squill, ipecacuanha, sesquicarbonate of ammonia, and the alkalies; inhalation of steam, alone or medicated, and the use of counterirritants, particularly the croton oil liniment applied over a large surface; and in every case it is advisable to have the throat inspected, for, when that condition exists which I have purposely and minutely described, it will both give rise to the paroxysms of coughing, and will prolong the paroxysms should they arise from irritation within the lungs themselves. I have recorded cases where, after patients have experienced no benefit from long courses of medicine, relief has at once been obtained by the local applications of astringents to the throat.

In the second division will be comprised those cases, the distinguishing features of which will be an excessive amount of secretion, with dyspnœa, occasioned by the difficulty to the ingress of air through the choked up bronchial tubes. The cough is more incessant than in the affections of the former division, and accompanied by loud gurglings in the trachea and chest. Patients are generally much reduced in flesh and strength, with haggard and careworn countenances, livid cheeks and lips, and injected and watery conjunctivæ. The expectorated fluid is thick, yellowish, and muco-purulent. The chest is uniformly dull on percussion; and, on applying the stethoscope, mucous râles are found to take the place of the dry sounds, which were more or less audible in cases coming under the first division. The bronchial tubes are found, after death, filled with mucus, thickened by disease, and ulcerated in patches. The muscular fibres are weakened as the disease becomes very chronic, and their general dilatation is disproportioned to the elasticity of the lungs and the muscular power to expel the secretion. The inability on the part of the patient to rid the chest of this large collection of fluid is so great, that the whole frame may be convulsed without any sound being produced, as in ordinary fits of coughing; and in extreme cases, patients will fall down in an insensible state from the obstruction to the passage of blood through the lungs.

It is said by some practitioners that ipecacuanha exercises a beneficial action in this form of disease; and that, contrary to its recognised power in promoting secretion, it has the opposite effect of restraining it. For my own part, I cannot say that I have ever witnessed any marked good result from the employment of this drug. It must be acknowledged that the most lasting benefit will accrue to our patients by the employment of any means which will tend towards facilitating the expulsion of mucus, and diminishing its rapid formation. Ipecacuanha as an emetic is inadmissible; but I find these means to be best accomplished by the occasional employment of zinc emetics, and the internal administration of zinc and alum, which certainly seems to me to have the desirable power of checking the secretion. The expectorant gums, as assafœtida and ammoniacum, together with decoction of senega and sulphuric ether, are usefully employed as adjuncts in enabling patients to expectorate with greater facility. I have not found the external application of counterirritants to be very serviceable in this form of the disease: indeed, as far as my experience will enable me to judge, I believe the value of blisters, mustard poultices, and such like, to be greatly overrated.

To the third division I refer those cases where dyspnœa and expectoration of a tolerably large quantity of thinnish fluid leads to the supposition of true bronchitis. Sometimes the expectorated fluid is greenish, or varies in tint from yellow, through rusty red, to the florid red of blood itself. On examination, it will be found that the lower lobes of both lungs crepitate; that there is more dulness than usual over the lower portions of the chest; and that the breathing is laboured, in consequence of the air-cells and small tubes being pressed by the quantity of blood always contained in the lungs, rather than from any structural change having taken place in the mucous lining of the bronchi, or from collections of mucus.

In fact, the organ mostly at fault, and the one upon which all these accessories depend, is the heart, the right side of which has become dilated and hypertrophied. Dr. Watson very justly remarks, "that Nature does, as it were, make use of the lungs as the readiest and nearest channel through which to relieve the oppression of the heart. The area of every bronchus and its ramifications afford altogether an immense extent of mucous surface; and Nature calls sometimes on a part, and sometimes on the whole, to relieve the circulation in its embarrassment; and sometimes she requires an augmentation of its natural secretions, in the profuse expectoration of mucus. For a long time this state may exist without any disorganisation; and, when the lungs are unable to hold out any longer, a change of structure takes place, which more and more embarrasses, and finally abolishes, the vital functions."

In the treatment of this form of disease, I place the greatest reliance upon digitalis. That it has an action over the capillary circulation, independently of its action on the heart itself,

cannot be doubted, from the effect produced in some cases where I have administered it to my patients with great relief. Pereira says: "In some cases, the frequency of the pulse is augmented; and, in other cases, the slowness of the pulse is preceded by an increased activity of the vascular system." Dr. Sanders, in his *Treatise on Pulmonary Consumption*, asserts that foxglove invariably excites the pulse, and refers to an experience of two thousand cases in proof. He says that he has seen the pulse rise from 70 to 120 under the use of foxglove, and, at the end of twenty-four hours, or sooner, fall with greater or less rapidity to 40, or even below this. The occasional abstraction of small quantities of blood from the arm relieves the distressing dyspnœa, and greatly assists the action of medicines; and the administration of such remedies as will powerfully excite the skin and kidneys in their secretions will always produce a beneficial change in this state of disease.

There is also another condition with alteration of the air-tubes seen in very old people, and sometimes in children, the most marked symptom; indeed, I have seen it the only symptom, being a panting respiration. In one case where I had an opportunity of examining the lungs after death, I found the cells collapsed, and the bronchi dilated. This state of disease appears to me to be described by different authors under the names of atrophy of the lung-substance, and flaccid emphysema. Andral and Stokes endeavour to account for this condition, by supposing that parts of the lungs do not receive their proper amount of air and nourishment, and that the disease affects the lungs of those whose sphere of respiration is limited. Dr. West describes a disease which he recognises in children after hooping-cough and chronic catarrh, as collapse of the lung; and he quotes the experience of Dr. Baly, where large portions of the lungs in adults assumed appearances similar to those in children. Dr. W. T. Gairdner, of Edinburgh, in his *Essays on the Pathological Anatomy of Bronchitis*, mentions this condition of lung as being of common occurrence in the epidemic of 1847. Stourman and Dechambre, in their researches on the structure of the lungs at different periods of life, remark that, on opening the thorax of old persons, even where no serious disturbance of respiration has been noticed, the lungs appear greatly shrunken, distending the cavity far less perfectly than in young individuals. These organs are preternaturally dry; deficient in elasticity; not audibly crepitant; soft and woolly to the touch. This state is due to marked wasting of the walls of the vesicles, and the condition closely borders on genuine atrophy. The changes which ensue as age advances, and when the autumn of life bears a resemblance to the spring of infancy, shew that many of the operations within the body become closely allied in their performance, and such changes are as marked in the respiration as they are in the mind itself.

"Nascentes morimur, finisque ab origine pendet."

Amongst the changes of structure resulting from bronchitis, must be first mentioned a thickening of the mucous membrane, without any other marked alteration. When the disease has existed for a time, an effusion of serum takes place upon the true surface of the mucous membrane, elevating the epithelial covering, which, it must be borne in mind, is not tessellated or laminated, but composed of a single layer; in time, a rent occurs through this, and the clear glairy fluid flows into the interior of the tubes; so long as the ciliary cylinders retain their position, the sounds produced by breathing will be the dry ones; but as the disease proceeds, ill treated or neglected, the ciliary epithelia are detached, as small flakes, or a greater length of a tube becomes stripped, and the ciliary cylinders mixed with the small granules of inflammatory exudations are rolled into pellets, and remain suspended in the expectorated mucus, in the manner I have already described, as the peculiar sputa of the first division of cases. In time, and as the disease advances, the submucous layers become thickened, and the epithelial layer is not produced in a manner fitting it to remain as a covering; the secretion then becomes abundant, and assumes the character I have described under the second division; viz., mucopurulent. This specific discharge was stated by Professor Badham, as early as 1808, to be the result of a transformation of mucus-corpuscles into pus-corpuscles, without the membrane so secreting being ulcerated; and Vogel has since confirmed the assertion by the microscope. Patches of ulceration do, however, occur, and generally about the ducts of the muciferous glands; the mucous coat around becoming softened, and surrounded by a network of injected capillaries. The hypertrophy does not cease here, but the longitudinal fibres are considerably augmented, and the entire tubes become permanently indurated. When this occurs, the inspirations are rendered difficult, and the expirations comparatively easy. The vesicular murmur is diminished, the chest loses its mobility, and the irregular calibre of the tubes creates a wheezing which accompanies every breath.

Another very important and common structural change is a dilated state of the bronchial tubes. This condition was first pointed out by Laennec, who ascribed it to a mechanical and accidental cause; viz., the accumulation of mucus and the efforts employed to get rid of it; and the continual recurrence of the distension, he believed, led to the permanent dilatation. Andral, dissatisfied with the exciting causes assumed by Laennec, attributed it to a want of proper nutrition of the textures composing the tubes. It remained, however, for Dr. Stokes to advance the most plausible cause. He supposes that, through inflammation, there is a loss of elasticity in the longitudinal and of contractile power in the annular fibres, with incapacity on the part of either to resist the mechanical influence of forcible inspiration, or of violent cough. Dr. Clendinning first drew attention to an absolute increase of lung-tissue, and showed that in some cases of bronchitis, the substance was more dense and heavy, although the vesicular structure be filled with air; and Dr. Corrigan, in the *Dublin Journal* for 1838, advanced an hypothesis to account for this morbid change. He assumed that a fibro-cellular texture becomes developed within the lung, and that the normal longitudinal fibres of the bronchial walls unite therewith, and produce constriction, and ultimately atrophy and obliteration of the pulmonary cells. The bronchial tubes then seek, through excessive dilatation, to fill up the vacated space; and to this disease he gives the title, cirrhosis of the lung. Dr. Williams, in his Lectures published in the *Medical Gazette*, says:—"One cause of dilated bronchi arises from the smaller bronchial tubes becoming permanently closed together with the air-cells, from adhesion of their sides, owing to pressure exercised upon them; and that the larger and middle sized bronchi which are not obliterated have to bear the full pressure of the inspired air, and become consequently dilated by it."

EMPYEMA AND THORACENTESIS.

By WM. VALENTINE BIRD, M.D., M.R.C.S., Seacombe.

ABOUT two years ago, a young man, aged 25, clerk in a merchant's office, who had been under my care for twelve months previously for fistula *in ano*, which had yielded to operation, but the discharge from which had greatly reduced him, sent for me. On interrogating him, I learned that he had been exposed to cold, keeping late hours, and living irregularly with regard to diet. As the symptoms of which he complained were referrible to the chest, I directed my attention there, and the following was the result of the examination. Distinct crepitant rhonchus was heard on the inferior lateral, and dorsal regions on the left side, and in the inframammary, inferior lateral, and lower dorsal on the right, joined with bronchophony, pleuritic friction, and lancinating pain, clearly indicating that the case with which I had to do was one of pleuropneumonia. Tartar emetic and calomel were the agents then employed; but, finding upon the following day the inflammation still high, and the pain excruciating, I reluctantly abstracted blood by means of leeches. In a few hours the pain had quite subsided, and there were ægophony and slightly increased dulness. Small doses of Dover's powder were then added to the powders.

It is unnecessary to pursue the daily history of the case; suffice it to say, the patient so far recovered, as for several months to cross the Mersey regularly, and attend to business, although the effusion in the pleura was considerable, for which absorbents, counterirritants, and diuretics were tried, until the poor fellow grew tired, and determine to let nature have her course; and being of a determined and energetic spirit, he would not be persuaded to take things quietly, but entered heart and soul into duties which involved great anxiety, and exposed him to all sorts of weather and late hours. After some unusually heavy days, however, he became rapidly worse; his left lung, with having to do double work, had evidently been over tasked, and there was great disturbance of the whole system, with excessive dyspnœa. As effusion appeared to be rapidly increasing, I at once determined to tap; and, as on the following day there was œdema of the integument, and nature appeared to be making an effort to point between the fifth and sixth ribs, I made an opening there, first dissecting down, and then dividing the pleura with

a bistoury, whereupon three pints of pus were evacuated; after which, the patient being faint, the wound was closed. On the following day, three pints, and after that two pints, were for a long time discharged daily. Weak iodurated injections had the effect of checking the amount of discharge, the odour of which was most offensive, particularly towards dissolution, which took place three months after the operation, the enormous quantity of thirty imperial pints having been evacuated.

Remarks. In recording the results of thoracentesis, it appears advisable that there should be a systematic classification of the cases in which it has been tried. For example: 1. Those in which serum alone is present; 2. Those where that fluid is mixed with lymph; 3. Those where there is pus as the result of aplastic inflammation; 4. Those where the pus is produced after the operation; and 5. Those where there is diseased bone.

In the above case, the operation could not be expected to afford more than temporary relief, inasmuch as the empyema was a sequela of pleuropneumonia, induced in a scrofulous constitution, previously debilitated by disease; and because it was not resorted to until the lung had become so entirely compressed and bound down, that a probe introduced into the chest, and pointed in any direction, encountered no obstruction.

Transactions of Branches.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH.

THE ANATOMY AND SURGERY OF TALIPES EQUINO-VARUS.

By Furneaux Jordan, Esq., Assistant-Surgeon to the Queen's Hospital, Birmingham.

[*Read October 20th*, 1859.]

Talipes equino-varus is the commonest and severest form of club-foot. The other forms—namely, equinus, valgus, and calcaneus—are less common, and more easily treated; pure varus, however, or simple adduction and rotation of the anterior two-thirds of the foot, is very rare. In nearly every case of varus there is some degree of equinus present, just as in many examples of valgus there is added more or less of calcaneus.

In estimating and describing the amount of deformity in any given instance of talipes equino-varus, it is convenient to use a classification such as that adopted by one of our first orthopædic authorities, Mr. Brodhurst.

In the first degree there is adduction of the anterior two-thirds of the foot, with slight elevation of the heel. In the second form, as in the first, there is adduction and extension of the anterior two-thirds of the foot, but in addition the inner side of the foot is drawn upwards, producing rotation of the foot at the articulation between the first and second rows of tarsal bones. In the third variety, adduction and extension are extreme; the sole of the foot looks directly inwards. The weight of the body is supported by the fourth and fifth metatarsal and the cuboid bones, over which a large callosity is formed. The transverse metatarsal arch is also narrowed, becoming in severe cases rather a circle than an arch. In the fourth degree, all the phenomena of the preceding varieties are present in an exaggerated form, the weight of the body being supported on the dorsum of the foot, which is more or less directed downwards, while the sole of the foot to a proportionate degree looks upwards.

As regards the position of the bones, the calcis is extremely elevated and rotated, so that the anterior articulating surfaces look more or less outwards, thus changing the aspect of all its surfaces; and it must not be forgotten that, except in very rare cases, it is the position and not the shape of a bone that is altered in deformities of the feet. The astragalus follows the calcis, the vertical and rotatory deformity of which is so marked in severe cases, that the upper surface is thrown forwards, and the head, which normally articulates with the scaphoid, is directed outwards, forming the principal projection at the outer aspect of the foot. The scaphoid is displaced to a greater extent than any other bone in talipes equino-varus. It is drawn inwards and backwards by the tibialis posticus muscle, so as to lie under and in contact with the inner malleolus. The abnormal position of this bone derives great importance from two circumstances: first, from the difficulty in the "after-treatment", in restoring it to its natural position; and secondly, from the great alteration it involves in the position of the posterior tibial tendon, which, instead of passing forwards and slightly downwards under the malleolus to its insertion into the scaphoid, now passes directly downwards. The cuneiform bones in front of the scaphoid, and the cuboid to their outer side, follow the scaphoid, and thus produce that adduction which marks these cases. The tibialis posticus not only assists in producing adduction, but, with the tibialis anticus, and, in very severe cases, the extensor proprius pollicis, tends to great elevation of the inner margin of the anterior two thirds of the foot—the rotation occurring at the articulation between the calcis and astragalus posteriorly, and the scaphoid and cuboid anteriorly.

My experience in the treatment of club-foot leads me to believe that the ligaments do not by any organic or other change offer any impediment to curative measures. This remark does not apply to the plantar fascia, the division of a strong band of which may, in occasional cases, contribute materially to a satisfactory termination of the treatment.

I turn now to the treatment. What objects are to be attained, and what are the best means to be used in attaining them? The heel is to be brought down—a very easy task; for, of all deformities, simple talipes equinus is the most easily relieved—but, which is much more difficult, the adduction must be removed, the sole of the foot directed downwards, and lastly, the metatarsal bones unrolled. To effect these ends, various means have been proposed. The worst method of treatment is that which affects to relieve the deformity by simple mechanical treatment—a proceeding at once unanatomical, painful, and inefficacious. A method almost as bad is that which attempts to cure talipes equino-varus by the subcutaneous division of the tendo Achillis alone. It is surprising that any surgeon should expect to relieve the adduction and rotation of the anterior two-thirds of the foot by dividing the Achillis tendon, which simply elevates the heel. In one case of double talipes equino-varus (the casts of which are before you), at present under my care, both the Achillis tendons were divided no less than four times on four different occasions during the first and second years of her age. This patient was twelve years old when she came under my treatment; and I cannot but consider that my difficulties were increased by the frequent division, followed by immediate stretching, of the tendo Achillis in early life. The deformity had not been relieved, and the tendon was reduced to the size of stout whipcord.

It would take too much time to refer to all the methods of treatment which have been devised for the relief of the equino-varus form of club-foot. I shall, therefore, now describe briefly only two methods of treatment adapted to two different classes of the deformity under consideration.

The first method consists in the attempt to remove all the varieties of the deformity by a single stage of treatment, after a division of all faulty tendons. In slight cases in infants, it frequently succeeds. In such a case, I recently brought down the heel and removed the adduction and rotation of the foot by one stage of mechanical treatment, after simultaneous division of the tendo Achillis and the tendons of the anterior and posterior tibial muscles. In these slighter forms the tendon of the tibialis posticus may be divided below and in front of the inner malleolus—the more so, because in such cases it is rarely necessary to divide the flexor longus digitorum.

The second form, which is one very commonly practised by the metropolitan orthopædists, is certainly the most efficacious, particularly in the severe forms, and in adult cases. It is divided into two stages. The first stage has for its object the reduction of the deformity to simple talipes equinus, in other words, the removal of the adduction and rotation. The second stage is directed to the elevation of the anterior part of the foot, and the depression of the heel. The commencement of the first stage consists in the division of the tendons of the tibialis posticus, and the flexor longus digitorum, where they lie close together behind the lower extremity of the tibia. The tenotome is introduced through the integument opposite the junction of the inner and posterior aspects of the tibia, from three quarters of an inch to an inch above the inner malleolus, and made to pass between the tibia and the two tendons in question. The cutting edge of the instrument is turned to the tendons, which are made tense at the same moment by an assistant, who abducts and flexes the foot. The tendon of the tibialis anticus is next divided near its insertion into the inner cuneiform bone. Any

very tense band of the plantar fascia may be divided at the same time. After division of the tendons, frequently not more than a drop or two of blood will appear at the wound, which latter are covered with dossils of lint, and secured by a bandage. The foot is now for three or four days confined by a gutta percha splint, in the position it was before the operation. At the third or fourth day after the subcutaneous operation, a straight splint, well notched at the lower extremity, is applied to the outer side of the leg, and for three or four weeks or longer the foot is gradually drawn outwards, so as to be placed in a straight line with the leg, or even placed a little more outwards. This position of the foot being accomplished, the second stage of the treatment commences by the division of the tendo Achillis. A few days afterwards, Scarpa's shoe, or one of its many modifications, may be applied, and the heel very gradually depressed. The last object to effect is the unrolling of the metatarsal arch; this may be done by appropriate pressure, but walking is the most effective agent when once the sole of the foot can be directed downwards.

It may be laid down as an axiom that, in the treatment of club-foot, no success can be looked for by the most careful and watchful after treatment, unless all the tendons which produced and keep up the deformity have been completely divided; on the other hand, the most judicious and effective use of the tenotome will be followed by complete failure, unless long and unremitting attention be given to appropriate after treatment. But while no policy can be fraught with more disappointment than the division of too few structures, it is equally an error to use the tenotome too freely. Muscles, and muscles only, produce and maintain deformity. In exceptional cases, a stout band of the strong plantar fascia may require division; but, as a general rule, the sheaths of tendons, vessels, nerves, and numerous fascia, while they may become accustomed to a long continued shortened position, never offer any serious impediment to a gradual return to the normal position. Very mischievous results are likely to follow if the parts are stretched immediately after operation; a custom I regret to see advocated in the large work on surgery by Mr. Gross, which has recently arrived on this side the Atlantic.

In conclusion, I venture to make one or two observations touching the results of my own experience and reflection. There is one precaution to which I would draw your attention in the division of the tibialis posticus, and the flexor longus digitorum. The ordinary direction is to introduce the tenotome at right angles with the surface of the leg; if, however, you examine the posterior aspect of the lower extremity of the tibia, you will find the surface to be so convex, as to require that the blade of the instrument should be carried obliquely backwards, in order to pass fairly between the bones and the tendons. If the knife be introduced in a purely vertical line, either its point will be arrested by the bone, or it will transfix one of the tendons, which it is the operator's intention to divide. Another peculiarity of my own treatment—and I am sure I derive great advantage from it—is the division of the tendo Achillis at the commencement of both the stages of treatment. No traction is made calculated to separate the divided ends, in the first stage, so that the tendon is not in the least degree weakened: at the same time the division to a certain degree facilitates the removal of the adduction and rotation; in other words, all the tarsal bones are rendered more amenable to mechanical treatment. Such advantage, however, is only gained after the complete division of the tibial tendons, and the tendon of the flexor longus digitorum. In the early part of the treatment of severe and adult cases, I am in the habit of seeing the patient not only every day, but two or three times a day for many days. The question cannot and should not be blinked, that in severe and adult cases extreme pressure is needed—such pressure as cannot be continued longer than two or three hours, because of the pain to the patient, and the risk of vesicating or abrading the parts pressed upon. For the same reasons, bandages and cushions of cotton wool require constant change of position; how to effect this change, while the objects to be accomplished do not vary, is sometimes a sufficiently puzzling task.

I now submit to your inspection casts of several of the cases which have been or are under my treatment. That you may be able to judge how far that treatment has been successful, I have had a cast taken of my worst case, four months after the commencement of treatment. The case was one of congenital talipes equino-varus approaching the fourth degree. The patient was a girl, thirteen years of age, who had walked on a callosity over the fourth and fifth metatarsal and the cuboid bones since she was eighteen months old. The treatment was divided into two stages. The tendons divided were the Achilles, the tibialis posticus and flexor longus digitorum, and the tibialis anticus.

A drawing of the two casts referred to above. One was taken immediately before treatment, the other (to the right) four months after.

[I have at present under my care at the Queen's Hospital an interesting and rare case of double club-hand—the *talipomanus vara* of Lode. I have just divided the palmaris longus, the flexor longus pollicis, and the flexor sublimis digitorum. I hope to be able to bring the case before the profession at an early period. December 1859.]

BATH AND BRISTOL BRANCH.

STONE AND HOMŒOPATHY.

By WILLIAM BUDD, M.D., Clifton, Senior Physician to the Bristol Royal Infirmary.

[*Read Dec. 1st*, 1859.]

ON the 25th of September last, I was sent for early in the morning to see a gentleman, about thirty years of age, who was suffering very severely in his face and jaw. I found the patient in bed, with a very large diffuse swelling under the jaw on the left side, entirely filling up the hollow between the jaw and the neck. On examination, it was evident that the swelling was due to enlargement of the left submaxillary gland. The parts were acutely painful, and very tender. A constant stream of saliva was flowing from the mouth. On looking into the mouth, the nature of the case at once revealed itself. Immediately underneath the tongue, a small yellow point, which grated on the finger, projected from the orifice of the salivary (Whartonian) duct on the left side. It was, in short, a case of enormous distension and consecutive inflammation of the left submaxillary gland, from obstruction of its duct by a calculus. There was no inordinate accumulation of tartar about the teeth.

When I informed the patient of the nature or his malady, he told me that he had felt something hard under his tongue for more than two years, but that the present symptoms (referring more especially to the pain and swelling) had only begun about ten days since.

The structures in contact with the stone were in process of ulceration; and on one side there was a small slough, about the eighth of an inch broad, and rather more than as much long.

As the offending body was clearly on the eve of liberation by natural methods, I did not think it necessary to suggest any operative measures for its removal. I contented myself, therefore, with ordering eight leeches to the swelling, to be followed by poppy fomentations.

As I was on the point of leaving the room, the patient for the first time told me that, about a week before consulting me, he had called in a homœopath, and had continued under his care up to the date of my own visit. I was curious to learn what might be the resources of the "infinitesimally small" in such a case. The opinion and the prescription given by this practitioner were equally characteristic. In order to appreciate both, I ought to mention that, eighteen months before the acute attack, the sufferer had, for very sufficient reasons, taken a gentle course of mercury. This fact, of which the disciple of Hahnemann had been duly informed, was the key at once to the theory and the practice adopted. In the first place, the case was declared to be one of salivation, which, in one sense, no doubt, was true enough. In the next, the salivation was said to be the effect of that vile mercury which the patient had been condemned to take eighteen months before. It was a great relief, however, when Dr. Similia Similibus complacently added, that all that was now needed was a little course of "mercurius", which would, no doubt, soon set matters right. And there, sure enough, were the globules of sugar of milk supposed to represent the infinitely little Mercury who, by

virtue of some magic powers evoked by interminable trituration, was to drive the big Mercury from the field.

On my return in the evening, the wife met me on the stairs, to tell me that, about an hour before, her husband had spat out the stone, and was now quite easy. The removal of the obstruction had been followed by a profuse flow of saliva and a rapid subsidence of the swelling.

I may add, that from that time nothing occurred to interrupt the convalescence. The concretion I now produce. It is exactly two-thirds of an inch long, and rather more than a quarter of an inch broad. In shape, it closely resembles what an orange-pip would be if slightly elongated. It weighs ten grains. I have not analysed it yet; but its composition is, no doubt, nearly identical with that of common tartar. When I entered the sick-room, it was lying on the dressing-table, close by the globules. The contrast was suggestive of many reflections. Poor Mercurius might be, and no doubt was, a very powerful god in his way; but, by the side of the stone, I confess he looked like a very little god indeed.

SEVERE INJURY OF THE HEAD, CAUSING RUPTURE OF THE MEMBRANA TYMPANI, AND COPIOUS DISCHARGE OF SEROUS FLUID FROM THE EAR.

By W. Michell Clarke, Esq., Surgeon to the Bristol General Hospital.

[*Read December 1st*, 1859,]

The diagnosis of fracture of the base of the skull is considered by surgeons to be a matter of great difficulty; but to certain signs they have been wont to attach great importance, and one sign is, I believe, pretty generally considered pathognomonic. This sign is the discharge of a peculiar fluid from the ear. Erichsen says: "The discharge of a thin watery fluid from the interior of the cranium is of rare occurrence; but, when it happens, may be considered pathognomonic of fracture of the base of the skull." It is also, I believe, generally held by surgeons at present (although this is a point that has been considerably questioned), that the fluid discharged is the cerebro-spinal, escaping through a fissure in the petrous portion of the temporal bone, which communicates with the subarachnoid spaces by means of a rent in the tubular prolongation of the arachnoid and dura mater into the meatus auditorius internus; and with the meatus externus by the tympanum and a rupture in its membrane. But there are not wanting arguments to shew that the fluid discharged from the ear in these cases is not always cerebro-spinal fluid; and hence arises a diminution in the value of this sign. To Mr. Prescott Hewett is due, as I believe, the credit of first pointing out the importance of carefully examining the fluid, and the circumstances attending its discharge; and to him also is due the credit of having shewn that a copious serous discharge may take place from the ear without any fracture of the petrous portion of the temporal bone—without any communication with the interior of the cranium at all.

But, not only has this discharge from the ear been considered important in a diagnostic point of view; the prognostics connected with it have also been the most serious. By some authorities, it has been held that these cases are invariably fatal; and, although the records of surgery disprove this position, yet the cases of recovery are sufficiently rare to make the following case worthy of notice.

Elif Svensen, a Norwegian sailor, was admitted into the General Hospital, under my care, on the 18th of August last, with the following history. He had been drinking, and whilst on watch, had fallen overboard amongst some deals, against which, as was supposed, he struck his head. The captain said that half an hour elapsed before he could be withdrawn from the water by the hook. He was apparently dead when taken out; but was, as reported, resuscitated by friction whilst on board ship, and then brought to the Hospital.

When he was received by Mr. Lansdown, our house-surgeon, he was very stupid, but not comatose. He could feel pain, and was capable of being roused. Mr. Lansdown's attention was arrested by a mixed discharge of blood and serum, which came from the left ear.

I saw the patient soon afterwards. He had been put to bed, and was being kept quiet. He lay apparently unconscious; but roused when asked a question loudly. He was very heavy and stupid. On the right side of the forehead there was a severe bruise, with considerable extravasation of blood. There continued to issue from the left ear a large quantity of serous fluid, with less admixture of blood than when he first came in. I could not, on this day, get a view of the membrana tympani, for want of appropriate light; but upon the following, I easily saw through the speculum that it was ruptured at the lower part. His general condition did not indicate any serious disturbance, and he lay very quiet, unless disturbed. I directed his head to be shaved, with a view to making a very careful examination of its whole surface, and prescribed for him an aperient dose containing calomel and jalap, and the low diet of the hospital.

At my next visit, on August 19th, the day after his admission, I found the stupor less deep. There was still no serious constitutional disturbance, but a copious discharge continued to pour from the left ear. His head had been shaved, but no mark of injury, besides that on the right side of the forehead, had been discovered. He had passed urine freely, but his bowels had not been moved, although he had taken a second dose of aperient medicine. I prescribed for him five grains of calomel, and a turpentine enema, if no movement should take place before the evening. I placed a cup under his ear for the purpose of collecting some of the fluid. By the time of my visit on the following day, the interval covering a period of twenty-hours, four ounces had collected; but this was by no means a measure of the whole quantity, for the pillow and bed were also kept very wet. The fluid presented all the general physical characters of serum of the blood. It also deposited a large quantity of albumen, when the appropriate tests were used, and under the microscope shewed a great number of blood-corpuscles. Now, at this time, I attached great seriousness to this case, almost entirely on account of the discharge of this fluid; for, in other respects, there was nothing alarming in the man's condition. He was easily roused; his head was cool; the skin was cool, and soft, and moist; the pulse 72, small and soft; and the tongue moist, and almost clean. I considered that whatever might be the source of the fluid, it indicated a fracture of the base of the skull. I also thought that the fluid was cerebro-spinal, mixed with a small quantity of blood. My patient was treated upon this supposition. His bowels had been freely moved after the enema.

He gradually recovered, and, with one or two little interruptions, progressively. The flow from the ear ceased entirely on August 21st, and it did not recur. This was on the fourth day after his admission. On the night of the 23rd, he was inclined to be violent; got out of bed, and wanted to go aboard ship; but when I visited him in the morning, he was tranquil, and appeared to be doing well. This was the only occurrence which indicated any cerebral disturbance after the first stupor had passed away. He was kept very quiet, and his diet improved very slowly, until September 28th, when he was discharged from the Hospital quite well, except that he complained of a hissing noise. The rupture in the membrane of the tympanum remained open, and the membrane around the aperture was more vascular than natural.

There is a case recorded by Mr. Prescott Hewett, in his elaborate lectures on the subject of *Fractures of the Skull*, of which case I had no knowledge when I treated the patient whose history I have just read, which proves that, contrary to the generally received opinion, the discharge of a considerable quantity of serous fluid from the ear may take place without affording any proof of fracture of the base of the skull. In this case the patient had received a severe injury of the head. The skull was fractured in the right central fossa of the occipital bone, and the fracture was traced into the foramen magnum, and into the right jugular foramen. But there was no fracture of the temporal bone, which was most carefully examined, both immediately, and after maceration in water. Whilst this patient survived, there was a copious discharge from the ear, which presented the same characters as the fluid which came from my own patient. There can be no question that this case, although I know of no similar, prevents me from attaching anything like certainty to the diagnosis of fracture of the base in my own case, and the more so, because of the absence of any corroborative signs. There was no effusion under the ocular conjunctiva; the flow of blood from the ear, if even it were of pure blood, was not long continued, nor were there the very serious symptoms of cerebral lesion that commonly accompany such fractures. But if the fluid was not cerebro-spinal, the question arises, What was its source? That it was not cerebro-spinal fluid, unmixed, was shewn by its character; for, instead of containing merely a trace of albumen, it deposited a considerable quantity; and it showed also under the microscope a large number of blood-corpuscles. Its characters were those of the serum of the blood; and if it be so considered, M. Chassaignac's theory, that the serum of the blood may per-

colate through a fissured bone from an injured sinus, might account for its discharge. I think it not at all improbable that the fluid discharged from the ear in some of these cases may be derived in such a way. A fissure, communicating with an opened sinus, which, at first, might give out blood, might, by gradual coagulation of the blood in it, become converted into a filter, which should only transmit serum. The quantity of fluid discharged from my patient would seem to have been too large to have been drained off from an extravasation of blood into the skull, as M. Laugier's case seemed to suggest.

In this case, M. Laugier found a clot so situated that its serum might have drained away through the fracture. Some experiments, also, which M. Laugier made, appeared to negative the results that Robert had obtained; for no fluid was discharged. But, in truth, experiments which depend for their result upon the presence or absence of cerebro-spinal fluid after death, must be received with some reservation.

Although, very often, a considerable quantity of cerebro-spinal fluid may be found at a *post mortem* examination, yet, in a large number of instances, no appreciable quantity will be discovered; and in these instances, of course, none would drain through the ear, however carefully an experiment might be performed for that purpose.

In order to ascertain the relative quantities of cerebro-spinal fluid present under different conditions of the circulation, Dr. Symonds instituted a number of experiments upon animals (dogs, cats, and rabbits), which are published in detail in his *Gulstonian Lectures;* but, in almost every case, with a negative result. No appreciable quantity of fluid was found. This result, however, afforded no proof that such a fluid might not be present during life, although it was well calculated to mislead.

In consequence of no fluid being found in so many *dead* animals, the spinal canal of a *living* dog was opened between the occiput and atlas, as in Cruveilhier's experiment. "Upon penetrating the arachnoid, a considerable quantity of a limpid fluid, which looked just like water, escaped through the opening, and rapidly filled up the space between the muscles. For a little time it came forth continuously, but afterwards a little escaped only with each expiration, and then the flow ceased altogether." This, then, affords sufficient proof that no reliance can be placed on negative results derived from *post mortem* examinations for cerebro-spinal fluid; and it may, I think, be clearly proved that the fluid, in many cases of fracture of the base, is truly cerebro-spinal.

Mr. Hewett thinks that the fluid in some of these cases is secreted by the membrane lining the tympanum and the mastoid cells; and, in his own case that I have quoted, no other way seems left of accounting for the discharge. It is curious, however, that in this case there existed an extensive fracture of the base of the skull, although it did not involve the temporal bone. It is also somewhat against Mr. Hewett's theory that, in cases of simple rupture of the membrana tympani, no discharge of serous fluid occurs; but often a considerable quantity of blood flows away. I have never met with any record of a case of simple rupture in which a more or less clear fluid has been discharged.

The practical conclusions to which I am led by a careful consideration of this subject, are: that when, by examination, the fluid is proved to have the qualities of cerebro-spinal fluid, then a diagnosis of fracture of the base of the skull may be made. Both experiment and clinical experience go to prove this. But that when, from the quality of the fluid and the general circumstances of the case, it is doubtful what is the source of the discharge, and whether there be fracture or not; that the patient should be treated upon the presumption of the greater, and not of the lesser injury, because it is very certain that fracture may exist, and yet for a time be evidenced by no cerebral lesion or general disturbance.

Medicine in the Florence University. The medical faculty will boast fifteen professors and six assistant-professors, by an unexampled liberality allowing two professors, of equal rank and with equal salary, both for clinical medicine and clinical surgery. The salaries appointed to all these chairs are handsomer than those ever allowed to the professors of any Italian university, averaging about 4,000 francs for each — a measure which can never be commended in sufficiently high terms; for it is full time that Italian governments should give full remuneration both to their magistrates and instructors, even if they pause a little before they unnecessarily increase their number.

Reviews and Notices.

The Nature and Treatment of Gout and Rheumatic Gout. By Alfred Baring Garrod, M.D, F.R.S., Fellow of the Royal College of Physicians; Physician to University College Hospital; Professor of Materia Medica, Therapeutics, and Clinical Medicine, at University College. Pp. 601. London: Walton and Maberly. 1859.

"Quod in sanguinis studio, utpote vitæ materiem et sanam et morbidam præbentis, medici nostri (perinde ac debeant) jampridem se occupant, en signa adsunt—quàm varia et exquisita! quæ Garrodius doctor, et medicinæ professor, ob reverentiam in Harveii nomen, hoc festo die officiosè instruxit!"

Thus spoke Dr. J. A. Wilson in the Harveian Oration delivered before the College of Physicians in 1850, exhibiting to his audience, with other things, specimens of uric acid and urate of soda from the blood of gouty patients, which the author of the work before us had prepared for the occasion. And now, after the lapse of nine years, having quadrupled the period he had spent in the investigation of gout when the Harveian orator gave him honourable mention among scientific physicians, Dr. Garrod comes before the profession with a complete treatise on the disease which he has made the object of his special study.

Turning to the table of contents of the book, we find that it is divided into fifteen chapters and an appendix. The subjects of the chapters, in brief, are: I, Introductory Remarks; Knowlege of the Ancient Writers upon the subject of Gout; Classification of Gout; II, Acute Gout; III, Chronic Gout; IV, Blood in Gout; V, Urine in Gout; VI and VII, Morbid Anatomy of Gout; VIII, Causes of Gout; IX, Pathology or Nature of Gout; X, XI, XII, and XIII, Treatment of Gout; XIV, Irregular Forms of Gout; XV, Rheumatic Gout.

In the first chapter, the author gives the opinions entertained regarding gout by Hippocrates, Celsus, Galen, Aretæus, Cælius Aurelianus, Alexander Trallianus, Aëtius, Paulus Ægineta, Demetrius Pepagomenos, and the Arabian physicians. He also quotes some passages from the comic poems of Lucian, the *Tragopodagra* and *Ocypus*, "in which many points connected with the nature and treatment of gout are very truthfully though ludicrously portrayed, showing that the knowledge of the disease possessed by the ancients was by no means inconsiderable."

Among the subsequent chapters, those in which we are informed that the results of Dr. Garrod's labours are especially contained, are those devoted to the condition of the blood and the characters of the urine, as well as those on the morbid anatomy and intimate nature of the disease. The influence of lead as a predisposing cause, and the treatment of the chronic forms of gout, have also occupied the author's careful attention. Let us examine to what end his researches have led him.

Uric Acid in the Blood of Gouty Patients. Many of the older physicians, as well as those of the present century, have adopted the hypothesis of the presence of a morbific matter in the blood in gout. What this morbific matter really was, however, or whether it even existed at all, was altogether a matter of conjecture until the year 1847, when Dr. Garrod found, in the blood of a gouty patient in University College Hospital, uric acid in the form of urate of soda, in a quantity greatly exceeding that mere trace which exists in healthy blood. This observation has since been confirmed by numerous examinations of gouty blood, in 1000 grains of the serum of which Dr. Garrod has found uric acid in quantities varying from 0.025 to 0.175 of a grain.

For the qualitative determination of the acid, the proper chemical tests must be applied; but for merely ascertaining its presence in the serum, Dr. Garrod has devised a simple

method, which he has termed the "uric acid thread experiment". It is thus described:—

"Take from one to two fluiddrachms of the serum of blood, and put it into a flattened glass dish or capsule: those I prefer are about three inches in diameter, and one third of an inch in depth, which can be readily procured at any glass-house; to this add ordinary strong acetic acid, in the proportion of six minims to each fluid-drachm of serum, which usually causes the evolution of a few bubbles of gas. When the fluids are well mixed, introduce a very fine thread, consisting of from one to three ultimate fibres, about an inch in length, from a piece of unwashed huckaback or other linen fabric, which should be depressed by means of a small rod, as a probe or point of a pencil. The glass should then be put aside in a moderately warm place, until the serum is set and almost dry; the mantelpiece in a room of the ordinary temperature, or a book-case, answers very well, the time required varying from twenty-four to forty-eight hours, depending on the warmth and degrees of the atmosphere. Should uric acid be present in the blood in quantities above a certain small amount" (about 0.025 of a grain in 1000 of serum, in addition to the normally existing trace), "it will crystallise, and during its crystallisation will be attracted to the thread, and assume forms not unlike that presented by sugar-candy on a string.... To observe this, the glass containing the dried serum should be placed under a linear magnifying power of about fifty or sixty, procured with an inch object-glass and low eye-piece; or a single lens of one-sixth of an inch focus answers perfectly. The uric acid is found in the form of rhombs; the size of the crystals varying with the rapidity with which the drying of the serum has been effected, and the quantity of uric acid in the blood." (Pp. 110-11).

In performing this experiment, several precautions are necessary for perfect success, but they may be summed up as consisting in a careful observance of the directions laid down in the preceding quotation. It is important also, that the serum be recently drawn; for Dr. Garrod finds that the uric acid undergoes decomposition into oxalic acid. This, he observes, leads to the inference that oxalic acid is formed in the body, not from the oxidation of saccharine matter, but from the decomposition of uric acid. Regarding oxalic acid, Dr. Garrod further informs us that he has found it in the blood in several cases of gout; it probably arises here from the disintegration of uric acid, but the subject is as yet obscure.

As might be expected, uric acid is also found in the serum of blisters raised on gouty patients; but the serum of the blister raised from an inflamed surface gives no indication of the acid by the thread experiment. It would seem as though the gouty inflammation had the power of destroying the uric acid in the blood of the part.

The presence of uric acid in abnormal quantity in the blood is, according to Dr. Garrod, absolutely pathognomonic of gout. It is always found in that disease; is never found in others, and especially is absent in rheumatism, as the author shews by the results of a number of observations which are tabulated in his appendix.

Urine in Gout. Dr. Garrod finds that the excretion of uric acid by the urine is diminished in acute gout, where the general health has usually been good during the intervals of the paroxysms. In seven cases, the daily excretion of the acid varied from 0.425 of a grain to 8.12 grains: the average being only 3.62 grains. In all the cases, a considerable quantity of uric acid was found in the serum of the blood. Dr. Garrod's experience on the subject shews that—

"In the earlier stages of acute gout the urine is scanty, and the uric acid, measured by the twenty-four hours' excretion, also diminished: that this acid is thrown out in much larger quantities as the disease is passing off, and that these amounts, even far above the patient's daily average, may be excreted, frequently passing the so-called critical discharges; lastly, the uric acid is again lessened, although not to the extent observed prior to or at the commencement of an attack." (Pp. 165-6.)

Another class of cases consists of subjects affected with chronic gout, the majority of them at the time of the examination having no urgent symptoms, but suffering from the sequelæ of the disease in the form of concretions of urate of soda, and stiffening and deformity of the joints. In seventeen cases of this kind examined by Dr. Garrod, there was found to be a still greater diminution in the excretion of uric acid; the maximum being 5.78 grains on one day, the next highest number 3.57 grains, and the total average much below a single grain.

In the urine of persons who had suffered more or less frequently from attacks of gout of varying degrees of intensity, examined at the time of complete freedom from the disease, the uric acid is also diminished.

In all the preceding cases, there does not appear to be any diminution in the daily excretion of urea.

Morbid Anatomy of Gout. The deposition of a chalk like matter in and around the parts of gouty patients is familiar to every practitioner; and has been looked on as the result of severe and protracted attacks of the disease. The researches of Dr. Garrod, however, have shewn him that, although there may be no external evidence of the deposit—not even specks in the cartilage of the ear—yet, in cases of undoubted gout, the joints may be incrusted to a serious degree. He infers, therefore, that gouty inflammation is invariably accompanied by the deposition of urate of soda; and he states further, that this deposition never occurs in any form of rheumatism, nor in chronic rheumatic arthritis. In a subsequent page, in speaking of the "gouty kidney"—regarding which he confirms the observations of Dr. Todd and others as to cases of inveterate chronic gout—he shews that, even when there is little or no external evidence of gouty concretion, the renal organs very frequently contain deposits of the same salt as is laid down in the joints.

The deposition of urate of soda within gouty joints has been made the subject of examination by Dr. William Budd, with the results of whose researches, as published in the *Medico-Chirurgical Transactions* for 1855, those of Dr. Garrod mainly agree. The latter author, however, finds that the deposit is in all cases crystalline, and not, as supposed by Dr. Budd, sometimes amorphous. It is not laid on the surface of the cartilage, but is covered by a thin organic layer; and extends to varying depths into the cartilage in the direction of the bone. By digestion for some days in warm water, the urate of soda deposit is removed, and the end of the bone, and its cartilage, present an almost healthy appearance. This shews that there is no removal of cartilage, but that the deposit is entirely interstitial. The occurrence of masses of urate of soda in the cavities of the joints, Dr. Garrod regards as rare, although minute white points, containing crystalline deposit of urate of soda, are sometimes met with in the synovial membranes. With regard to the alleged presence of gouty deposits on other tissues and organs, as the lungs, heart, aorta, meninges, etc., Dr. Garrod expresses great doubt. The deposits found in these parts he has never found to contain urate of soda: and he believes that they have generally consisted of carbonate and phosphate of lime. Even in the deposits on the valves of the heart, and in the atheroma of the arteries of gouty patients, with extensive chalk-stones, there is no uric acid.

Nature of Gout. The author's views on this subject are summed up in the following propositions, for the further discussion of which, as well as of several questions connected with the phenomena of gout, we must refer our readers to the work.

"1. In true gout, uric acid is invariably present in the blood in abnormal quantities, in the form of urate of soda, both prior to and at the period of the seizure, and is essential to its production; but it can be equally proved that the acid may occasionally exist largely in the circulating fluid without the development of inflammatory symptoms, as, for example, in lead-poisoning and a few other instances. Its mere presence, therefore, does not explain the occurrence of the gouty paroxysm. 2. The investigations recently made in the morbid anatomy of gout prove incontestably that true gouty inflammation is *always* accompanied with a deposition of urate of soda

in the inflamed part. 3. The deposit is crystalline and interstitial; and when once the cartilages and ligamentous structures become infiltrated, such deposition remains for a lengthened time, perhaps during life. 4. The deposited urate of soda may be looked upon as the cause, and not the effect, of the gouty inflammation. 5. The inflammation of gout tends to the destruction of the urate of soda in the blood of the part, and consequently of the system generally. 6. The kidneys are implicated in gout, probably in its early, and certainly in its chronic forms; and the affection is not only functional, but subsequently becomes structural; the urinary secretion is also altered in composition. 7. An impure state of the blood, arising principally from the presence of urate of soda, is the probable cause of the disturbances which not unfrequently precede the seizure, and of many of the anomalous symptoms to which gouty subjects are liable. 8. The causes which predispose to gout, independently of those connected with individual peculiarity, are either such as produce an increased formation of uric acid in the system, or which lead to its retention in the blood. 9. The causes exciting a gouty fit are those which induce a less alkaline condition of the blood, or which greatly augment the formation of uric acid, or such as temporarily check the power of the kidneys for eliminating the principle." (Pp. 340-1.)

Treatment. To this important subject one hundred and thirty-six pages of the work are devoted, in which, besides general observations on the treatment of acute and of chronic gout, the merits of the following remedies are discussed:—purgatives; mercurials; diuretics and diaphoretics; anodynes and narcotics; blood-letting; leeches; blisters and other local applications; colchicum; white hellebore; iodide of potassium; guiacum; alkalies and salines; lithia salts; *fraxinus excelsior*, or common ash; stomachics and tonics; etc. As this review has already extended to a considerable length, we must be content with giving a general commendation to the chapter on treatment, and select therefrom two or three subjects only for remark.

Dr. Garrod enters fully into the consideration of the action of *colchicum*. Contrary to the opinions of Drs. Christison and Maclagan and Professor Chelius, he holds, from observation and analysis, that this drug does not increase the quantity of uric acid eliminated in the urine: on the contrary, it appears to diminish it when used for a lengthened time. A source of fallacy in the analyses of Drs. Christison and Maclagan lies in their having examined specimens of urine passed at certain times of the day only; whereas the entire quantity passed in the twenty-four hours was examined by Dr. Garrod. Nor, according to Dr. Garrod, has colchicum any influence on the excretion of urea or other solid constituents of the urine; and it often even diminishes the quantity of the urine, especially when it produces a marked effect on the secretions from the alimentary canal. Nevertheless, the author has a high opinion of the value of colchicum, especially in acute gout. He confesses, however, that the *modus operandi* of this remedy requires farther investigation.

Many of our readers will possibly remember that, in their chemical studies, they have heard or read of an alkali called *lithia;* and that they have generally passed it by as a thing of little or no practical importance. Dr. Garrod, however, has employed the salts of this alkali in the treatment of the uric acid diathesis and of confirmed gout, with results which encourage its further use.

"When given internally, in doses of from one to four grains, dissolved in water, and repeated two or three times a day, carbonate of lithia produces no direct physiological symptoms, but exerts a marked influence in cases where patients are voiding uric gravel, causing the formation of the deposits to become less or cease altogether. In many instances in which I have administered it in gouty subjects, the result has been to diminish the frequency of the attack, and altogether improve the condition of the patients. I am of opinion that the salts of lithia offer to the physician most valuable agents in these cases; as their alkalinising property is of the highest order, on account of the smallness of their atomic weight; and their solvent power for uric acid and urates is far greater than that of any other agent; in addition to which, their local influence is slight, and their use does not appear to be attended with any injurious consequences.

"To demonstrate the superior power of carbonate of lithia, in removing the deposits of urate of soda from gouty cartilages, I performed the following experiment:—Solutions were made of the carbonates of lithia, potash, and soda, in the proportion of one grain of the dry salt to each fluid ounce of distilled water; into these were placed small pieces of cartilage, completely infiltrated with urate deposit, which were allowed to remain for forty-eight hours. At the end of that time, the cartilage taken from the lithia solution was found to be restored to a natural condition; that from the potash was much acted upon; but that which had been submitted to the influence of carbonate of soda remained unaltered." (Pp. 438-9.)

The following rules, for the administration of the carbonate or other salts of lithia, are laid down by the author:—

"They should be given freely diluted, either in the form of powder dissolved in a large quantity of water, or, which is preferable, dissolved in aërated water, so as to form *lithia-water*, corresponding, except in strength, with the soda or potash-water in general use. When a large amount of alkali is desirable, I have usually prescribed the carbonate of lithia with some salt of potash, as the carbonate or citrate; and the combination may advantageously be administered in the aërated state. Carbonate of lithia can also be given with phosphate of ammonia, in the same form; but it must be recollected that the phosphate as well as the carbonate of this base are very sparingly soluble in water. The great bar to the use of the salts of lithia in medicine has hitherto been their expense; but in the small doses in which they are required, this need not be a serious objection, and, moreover, they can now be obtained at a much more moderate charge. It is probable that, should the benefit derived from their employment in gouty cases, gravel, and calculus—in which it is of importance to keep uric acid and urates in solution—be equal to what may be reasonably anticipated, the supply of this drug might be greatly increased, and its cost proportionally diminished." (Pp. 440-1.)

We must pass over the notice of several other portions of Dr. Garrod's work, and, in conclusion, sum up our opinion of its merits. Knowing that for twelve years the author had been engaged in the investigation of the nature and treatment of gout, we commenced the perusal of his book with the expectation of receiving instruction. In this we have not been disappointed; nor will any practitioner who reads it, fail to derive benefit therefrom. A knowledge of the literature of his subject, chemical skill, and a clinical acquaintance with the disease, together with an observant and cautious mind, are all here indicated. Judging the book, less *ex cathedrâ* than as a disciple may judge of the merits of his master, we would give it a place in the foremost rank among the British medical literature of the present day.

AN ACCOUNT OF THE LIFE, LECTURES, AND WRITINGS OF WILLIAM CULLEN, M.D. In two volumes. London and Edinburgh: William Blackwood and Sons. 1860.

THE first volume of this interesting history, written by Dr. JOHN THOMSON, was issued as long ago as the year 1832; and now, after a lapse of twenty-seven years, the concluding volume is issued with it. There are few men whose lives would bear this pause of upwards of a quarter of a century between the commencement and conclusion of their biographies; but the name of Cullen stands so high that an interruption of this sort will be little heeded. The concluding volume was commenced by Dr. JOHN THOMSON and Dr. WILLIAM THOMSON, and concluded by Dr. DAVID CRAIGIE. The latter part of the volume is devoted to a consideration of the state of the *Materia Medica* at the time Cullen undertook his great work on this subject, which, in fact, revolutionised it, and raised the *Pharmacopœias* of both Edinburgh and London from a mere collection of old wives' remedies, often of the most disgusting kind, to a scientific work. We question if the *Nosology* of Cullen was nearly so great a gift to the medical profession as this result of his labour in classifying the nature and use of remedies. If the Committee appointed by the Medical Council to draw up

the new *Pharmacopœia* can only make as great an advance upon the officinal work of the present time as Cullen did upon the one of his day, materia medica (which, it must be admitted, at present lags behind the other sciences) will receive an immense impulse. The editor has wisely modified the original view with respect to this biography, which would have extended the work to many volumes. So much time has passed since his death, and so many of the doctrines, so fiercely controverted at the time, have since been so greatly modified by later discoveries, that much which would have been vastly interesting closer upon the lifetime of the disputants, would now be obsolete. The biography, as it stands, forms a most interesting chapter in the progress of medicine, and it is one which every medical man should read.

British Medical Journal.

SATURDAY, JANUARY 7TH, 1860.

THE JOURNAL.

WITH much pleasure we call the attention of the members of the Association to an advertisement in this day's number, in which are enumerated certain series of lectures and essays, which will appear in the early numbers of the BRITISH MEDICAL JOURNAL for the year on which we are now entering. The list represents merely what has been positively promised; but we shall spare no pains in endeavouring to obtain from time to time for the JOURNAL a regular supply of such material as will at once elevate the character of the periodical, and prove instructive to the associates.

CLERICAL QUACKERY.

WHEN we commented last week on the Rev. Hugh Reed's "cure for cancer", we regret that, in our ignorance, we very much underrated his powers. This new physician of body as well as mind by no means confines himself to monopolising the means of entirely eradicating cancer; this, it appears, is but the latest of his triumphs. A pamphlet, bearing date 1858, just put into our hands by a correspondent, entitled "*Observations, with Proofs that Cholera and Small-Pox are both to be prevented and cured:* An Offering to the Public, by the Rev. H. Reed, late Incumbent of Lima, Savannah, Clarendon, Jamaica, and now officiating Minister at St. Martin's-in-the-Fields, London,"—claims for that gentleman the possession of a specific against the attacks of two other deadly scourges of the human race.

The reverend gentleman, upon his own showing, is therefore clearly the depository of knowledge which would, if applied, at once clear two of our metropolitan hospitals of all their inmates, and go far to sweep from India its most fatal disease. In what manner this gifted curate has come possessed of this knowledge, pregnant with such benefits to the whole human race, we are not informed. Possibly, however, his wanderings in the New World have had something to do with it.

The Rev. Hugh Reed, in his pamphlet, begins by a rather suspicious complaint against the perversity of mankind. Like Jesus of Nazareth, the Apostles, Harvey, and Wilberforce, he proclaims eventful truths; but the stiff-necked generation will not listen; they "steel their hearts and shut their senses against their benefactors". This, it must be confessed, is in the usual style of all impudent pretenders; we need not, therefore, dwell upon it. But the reverend gentleman professes to give the public proofs of his ability to clear away for ever two of the most destructive diseases. We have read over his pamphlet carefully, and are not surprised to find that he judiciously avoids any reference to proofs whatever. If he does not condescend to tell us how he accomplishes his rather triumphant programme, he at least tells us, with reference to small-pox, how he does not go to work; for he tells us that "the result (its prevention) is not to be effected through the mysterious absurdity of vaccination". Possibly our readers will be perfectly satisfied with this specimen of the reverend gentleman's medical knowledge; but we must bear with him just a moment longer. The cholera, he informs us, "may be met and overcome with certainty and ease; nay, it cannot attack any subjected to the proper preventive remedy." After such a bold statement as this, we naturally looked for a little more light—just a moment's glance at the reverend gentleman's ready method of confronting the King of Terrors in one of his most terrible forms. But all the satisfaction we can find is the next paragraph, which runs as follows:—"All that the writer need do here, in furtherance of his assertion, is to give the copy of a letter received from Mr. Simon, Chief General Officer of the General Board of Health." Tempted by so respectable a name, we turned to Mr. Simon's letter, and found it to be simply a note from that gentleman, stating that Mr. Whitfield, the resident medical officer of St. Thomas Hospital, will be happy to give a trial to his method of treatment.

The Reverend Hugh Reed must have a very low opinion of the credulity of mankind, if he believes that he is likely to impose upon any living creature by such stuff as this. Cholera and small-pox having failed him, the reverend gentleman naturally turned his attention to another incurable disease, which has likewise yielded to his remarkable active remedies—cancer. A gentleman, who has analysed the substance given by the reverend gentleman to a patient for the eradication of this disease, informs us that the active agent in it is mercury. Indeed, this drug seems to be rather a favourite, as we find he is in the habit of giving it to patients afflicted with tubercular diseases, even to the length of salivating them. Thus, as we remarked last week, according to the Medical Act, although a man dare not unlawfully style himself a surgeon, he may yet take upon himself the duty of prescribing deadly medical drugs to the great injury of the lungs. But, interposes the reader, if he does so with a charitable intention—for the mere love of humanity—his conduct may be excused. We regret to find, however, that our medical curate is not above accepting an honorarium for his exertions. Mr. Weedon Cooke, in a letter to the *Times*, states that he took a guinea from a poor woman, and afterwards condescended to accept scantier fees. We are afraid, therefore, that the reverend gentleman must descend from his pedestal as a would-be benefactor of mankind, and must consent to rank himself as a sordid lover of pelf, who, by perfectly unfounded statements, endeavours to obtain the care of poor death-stricken creatures, eager to clutch at any straw that holds out to them a chance of life. We know not what may be the verdict of his clerical brethren, upon

a man who thus deliberately neglects his proper spiritual duties, to take upon himself by inspiration those of a highly skilled physician for a money remuneration; but this we know, that all other classes must view it with shame in disgust. But here the matter does not end.

It has been considered an inviolable rule of our profession, that no member of it shall keep secret any remedy that is valuable in the alleviation of disease. Any medical man that did so would be at once tabooed—his professional brethren would hold aloof from him as from a man who traded on the misery of his fellow-creatures. To the credit of our profession, instances of self-seeking of this kind are, comparatively speaking, unknown. What shall we say, then, of a minister of the gospel who openly declares that he is in possession of a cure for one of the most terrible diseases which afflicts humanity, and yet refuses to make that remedy known, or to enter into any discussion as to his method of operating? Dr. Fell did indeed for a time confine his secret remedy to the medical officers of the hospital who were weak enough to give it a trial, but he never dreamed of keeping the secret within his own breast for the purpose of reaping a harvest from the credulous. The Rev. Hugh Reed has been challenged in the public press to submit his method to the investigation of importunate inquirers, but he flippantly refuses, and presents to the world the sad spectacle of a minister of religion deliberately stepping out of his own path of duty to usurp the functions of another profession whose beneficial maxims and usages he knows not how to emulate.

THE WEEK.

WE have over and over again called attention to the fact that the selection of St. Thomas's as the coaling station for the West India mail steamers is a most glaring instance of a total disregard of all sanitary knowledge. Scarcely a steamer leaves the pestilential bay in which the operation of coaling takes place, without paying the penalty in a succession of cases of yellow fever on the voyage homeward. Only latterly, human life has been most wantonly sacrificed by this obstinate persistence in maintaining a notoriously unhealthy station. A writer in the *Times* states, that he has seen a dead turkey remain for days in the bay in exactly the same spot, so little tide or motion of any kind is there in the pestiferous waters of the bay. When a West India steamer leaves England, we as deliberately condemn a certain number of her crew to death by sending them to this hotbed of yellow fever, as though we made them cast lots in Southampton harbour, and drowned those to whom the lots fell.

The medical press has from time to time expressed its opinion of certain exhibitions bearing the title of "anatomical museums," but which are only calculated to excite disgust in one class of minds, or the lowest passions in another. Having taken part in the attack on these institutions, we are heartily glad to learn that one of them has received, from the borough magistrates of a provincial town, a considerably rough handling. Here is the case. Two persons, named William and Louis Lloyd, recently opened an "anatomical museum" for exhibition in a public part of Leeds. As soon as the intention of the Messrs. Lloyd to open the museum was known, the borough magistrates decided, under certain powers given them by the Leeds Improvement Act, on examining the collection with the object of ascertaining whether the exhibition was one of which they could approve. It being found that the models were dangerous to public morality, they were impounded, and the owners, on Saturday last, appeared before the magistrates to answer an information laid under Lord Campbell's Act for the suppression of obscene works and publications. Mr. Nunneley, who examined the models, stated that in his opinion the models were utterly useless for any scientific object, and would only have the effect of pandering to the worst passions of human nature. The counsel for the defence attempted to show that the exhibition would rather prevent than increase immorality: but the bench decided on ordering the models to be destroyed. As notice of appeal was given, however, they were simply impounded. The action of the Leeds magistrates in this matter is very creditable to them; and we hope they will have succeeded in checking the career of what are evidently a pair of disgusting charlatans.

It is with a feeling of the deepest disgust that we record in our news columns the conduct of the senior naval officer on the Australian station, in respect to the funeral of the deceased surgeon of the *Cordelia*. The supercilious disregard of even the ordinary manifestations of respect for a brother officer, and the positive indelicacy in his proceedings, which the Commodore is said to have exhibited, can with difficulty, if at all, be paralleled in our public services. We would hope, for the credit of the navy, that the case has been exaggerated by the correspondent of the *United Service Gazette*. To the officers of the artillery and 12th regiment, who paid the remains of the deceased officer the respect which was denied by the chief of his own service, all honour is due. Their generous conduct stands out in pleasing contrast to the churlishness of Commodore Loring.

The Senate of the University of London have lately instituted the degrees of Bachelor and Doctor of Science, denoted respectively by the letters B.Sc. and D.Sc. For the degree of bachelor, two examinations are to be undergone. The first (before being admitted, to which the candidate must have passed the matriculation examination a year previously) contains the following subjects. Mathematics; Mechanical and Natural Philosophy; Chemistry; Botany and Vegetable Physiology; and Zoology and Animal Physiology. In the second examination, which may take place not less than a year after the first, the subjects are for the most part those of the first examination carried to a higher degree: they are, Mechanical and Natural Philosophy (excluding astronomy); Inorganic and Organic Chemistry; Animal Physiology; Geology and Palæontology; and Logic and Moral Philosophy. Bachelors in Arts of the University of London, and undergraduates who shall have passed the first examination for the degree of Bachelor of Medicine, will be required to pass the second B.Sc. examination only. For the degree of Doctor of Science, the candidate must have obtained the degree of B.Sc. two years previously, and must pass a satisfactory examination in one of the following sixteen branches of knowledge, to be selected by himself, viz.:

in *Physical Science* Mathematics; Mechanical Science; Astronomy; Inorganic Chemistry; Organic Chemistry; Electricity; Magnetism; Physical Optics, Heat, and Acoustics; in *Biological Science*, Animal Physiology; Comparative Anatomy; Zoology; Vegetable Physiology; Systematic Botany; in *Geological and Palæontological Science*, Geology; Palæontology; and in *Mental Science*, Logic and Moral Philosophy.

Editor's Letter Box.

THE FINANCES OF THE ASSOCIATION.

LETTER FROM JOHN DIX, ESQ.

SIR,—In my last letter, published November 19th, I directed the attention of the association to the very important circumstance that the last annual financial statement did not fairly represent our liabilities, inasmuch as it showed merely the sum due to the treasurer (£294); although there were also bills to a large amount (£600) then due, but unpaid, and unpayable for want of funds. So that the real debt of the Association was well on to £900, instead of about £300, as was there set forth.

I pointed out, also, that by overstating the "old debt," and understating the present debt, we had been cajoled into the belief that our income had exceeded our expenses, and that "our financial difficulty was rapidly proceeding to the vanishing point." I proved, from the published balance-sheets of the preceding years, that this was altogether incorrect, and that (contrary to statements of Council and editorial assertions) our natural income had not equalled our expenditure—that the debt had not been reduced, even to the extent of the "call fund"—and that but for this extraneous aid our deficit would have been greater than in 1856.

I beg to assure you, sir, that it is by no means satisfactory to me to find that the "statement of accounts" published last week by the Committee of Council entirely confirms these conclusions. I would much rather, for the sake of the association, that they had been wrong. As I expected, the state of the case is even worse than I made it appear. On two points, my information was approximate, not positive—viz., the amount of the "call fund," and the amount of the "bills owing;" and in each of these the reality strengthens my position, and shows that I had *understated* my case. The "call fund" (now* for the first time, appearing before us in its entirety) appears to have produced £638. I had estimated it at £492. The unpaid bills amount to £624, instead of £600, making the debt £918, instead of £893, as I had put it. Therefore, my previous calculations, corrected, will read thus:—

The debt of 1856, £1312, has been diminished by £394, leaving £918—the debt of 1858. The call fund being £638, exceeds this reduction by £244, by which sum, therefore—but for the special contribution—the debt of the association would have been increased, and the £1312 of 1856 would have become £1556 in 1858, being an average increase of £81 a-year—the addition to the debt for the last year alone being £79.

Yet we are told by the Committee of Council, that during this same three years, there has been "for each year an average surplus of £126" excess of income over expenditure.

How is this startling discrepancy to be reconciled, and who is in the right in the matter? I am bound to believe that the committee who have published this statement believe in its correctness, and I am as thoroughly convinced that mine, also, is absolutely and entirely accurate. I proceed, therefore, to point out what appears to me a most egregrious oversight in their calculations.

And first we find it stated in this report, that "at the beginning of 1856, the debt *due to the treasurer* was £1312." This has not so appeared in previous reports, for though we were told that our debts amounted to that sum,* it was thus divided. To treasurer, £692; *to printer and others*, £623. Of course it was quite easy for the treasurer to advance more money to pay off these bills, and so become the sole creditor of the Association; and from the foregoing statement we must presume that he did this. A very proper course too; one which I hope will be adopted again before the close of the year just ending, so our debt may stand in the next balance sheet as a single sum, due to the treasurer, that every one may see at a glance how much it really is. Yet it is simply *this change of creditor* which leads to the apparent discrepancy between my statement and that of the Council, and which has enabled the committee to put forth this their recent plausible but utterly fallacious "statement of accounts."

Thus it is certain, that in 1856, this sum of £1312 (to whomsoever due), represented the entire liabilities of the Association: we did not owe another pound anywhere, or to anyone. Let us then suppose (according to the terms of the present report) that we owed that much *to our treasurer*. Are we then to compare this debt with that due to treasurer, January 1st, 1859, which being but £294, *leaves debts elsewhere amounting to no less than* £624? We then had but one creditor, the treasurer, to whom we owed £1312—now we have two creditors—treasurer £294, printer, etc., £624. To make the cases parallel, we must suppose that the treasurer has again paid up those outstanding bills—has again become our sole creditor—and what should we then owe him? why not £294, but £918. Hence we see, that whilst the treasurer's claim has been reduced to this much boasted extent, it has been at the expense of our credit elsewhere, and we have run deeply into debt with our printer and publisher.

It is easy for any man to have a balance at his banker's, if he pay in to his account all his receipts, and leaves his tradesmen's bills unpaid. And if expenditure means sums actually disbursed, regardless of accumulating debts, and taking no notice of stock purchased, but not paid for,—it is easy to make it appear that one's income has exceeded one's expenditure, keeping the money received in one's own pocket, and shutting one's eyes to the claims of others. This is a novel and truly refreshing principle of finance; it is indeed "a new way to pay old debts", but, like some other novelties, it does not bear the test of honest investigation; and, although this method has been adopted by the Council in conducting the affairs of the Association, I think it will scarcely be recommended by them for general adoption by their fellow-associates in the management of their private accounts.

So much for this extraordinary document called a "statement of accounts" "adopted" by the Committee of Council at their recent meeting, and published for the edification of the Association in the last number of the JOURNAL, which undertakes to prove that we have been diminishing our debt (out of our ordinary income) at the rate of £126 a year; the fact being, that the debt has been all the while on the increase, at an average rate of £81 a year, as I think I have shown beyond cavil or dispute.

How the duodecemviri named in the report could possibly have fallen into this palpable delusion, this unmistakable and most obvious error, verily passes my comprehension.

I am, etc., JOHN DIX.

Hull, December 20th, 1859.

[The subjoined letter from Sir Charles Hastings has reference to the foregoing. EDITOR.]

THE FINANCES OF THE ASSOCIATION.

LETTER FROM SIR CHARLES HASTINGS, M.D.

SIR,—Having, as President of the Council, seen the letter sent by Mr. Dix, which impugns the accuracy of the financial statement of the Committee of Council, I proposed to Mr. Dix to delay the publication of his letter, until the financial statement for 1859 was ready for publication. This I did, because the erroneous views into which Mr. Dix has fallen would thus have been apparent, and might have rendered further discussion unnecessary.

I regret, for his own sake, that Mr. Dix has not fallen in with my suggestion; but as he refuses to do so, I cannot allow his erroneous views to be placed before the members without

* This "old debt" furnishes an apt illustration of the loose and imperfect manner in which our accounts are kept, or, at any rate, audited and published. Thus the Committee of investigation in 1856 reported the debt at £1294 (as I gave it in my former letter), viz., Treasurer, £692, Printer, £602 (see JOURNAL, August 6th, 1859, p. 674). When next it appears in the balance-sheet (see JOURNAL, August 8th, 1857, p. 668), it has grown in some mysterious and unexplained manner to £1316, the increase being in the printer's account; whilst on the very next page it is spoken of as £1312; since which time we have been repeatedly told on authority that our debt was then near £2000; now again it appears as £1312, but with a new face, viz, as one single debt to the Treasurer, instead of being divided, as heretofore. Again, in the balance-sheet for 1857, appears in the receipts this item:—Subscriptions and arrears, £2005. Now we find that of this sum, £146 belongs to the "call fund".

also setting before them such information, as it is in my power, as Treasurer, shortly to give. This shows, that the statement of the Committee, that the debt of the Association during the three years 1856, 1857, and 1858, has been reduced, is strictly correct.

A few words will be sufficient to show this.

On the 1st of January, 1856, the debt due to the Treasurer was nearly £700.

On the 1st of January, 1859, the debt due to the Treasurer was reduced to less than £300.

On the 1st of January, 1856, and on the 1st of January, 1859, the other liabilities of the Association did not materially differ, therefore the financial position of the Association January 1st, 1859, was clearly more favourable than it was January 1st, 1856.

All that I further request is, that every associate will suspend his judgment until the financial statement for 1859 is published.

I am, etc.,

Charles Hastings, *Treasurer.*

Worcester, January 3rd, 1860.

IS THE NEW MEDICAL ACT A DEAD LETTER?

Letter from A. B. Steele, Esq.

Sir,—I wish to direct attention to the case under the Medical Act, reported in your columns, which was heard before Mr. Mansfield, stipendiary magistrate for the borough of Liverpool, in which it was proved that the defendant, Hamilton, had signed a medical certificate of the cause of death, adding to his name the title "Surgeon of the College of Boston, U. S."; also that he had acted as a surgeon, by visiting and giving medicine, etc., for which he was paid; and, although these facts were not contradicted, the case was dismissed on the ground that the defendant did not pretend he was registered under the Act, but, on the contrary, that he had guarded himself against such an assumption by the addition of the title "College of Boston". If Mr. Mansfield's interpretation of the Medical Act is sound, then that measure becomes a dead letter, so far as quacks and unqualified persons are concerned, inasmuch as they can, in the easiest possible manner, evade the provisions of Sec. xl. No act of practice, no assumption of title, renders them amenable to the law, unless they expressly imply that they are registered under the Act.

Contrasting the decision in this case with that in Fitzpatrick *v.* Hallows, it appears that the operation of the Medical Act is to restrict the privileges heretofore enjoyed by qualified practitioners; while, on the other hand, it affords protection to quacks and unqualified persons, permitting them to practise, and use any titles they please, so long as they do not pretend to be on the *Register*. Surely this anomaly cannot be suffered to continue. Unless the appeal which will be made to the court above reverses Mr. Mansfield's decision, no time should be lost in urging upon the Government the importance of so amending the Act that the intention of its framers can no longer be evaded by a mere legal quibble. If this case is a fair interpretation of the law, the public and the profession would be far better without any Medical Act at all, than with such an anomalous and vaguely worded statute.

I am, etc., A. B. Steele,

Hon. Sec. Liverpool Medical Registration Association.

January 1860.

ENFORCEMENT OF PENALTIES UNDER THE MEDICAL ACT.

Letter from H. M. Williamson, Esq., and J. Thorburn, M.D.

Sir,—At a meeting of the Committee of the Manchester District Medical Registration Association, it was determined to seek the cooperation of other kindred Associations in the appointment of a deputation to wait upon the Home Secretary, the object being to express their great disappointment that the enforcement of penalties under the Medical Act has not as yet been undertaken by the Registrar or Medical Council. We shall be happy to correspond with any Associations that may be favourable to the project, and, in the meantime, will feel greatly obliged if you will afford this a place in your columns.

We are, etc. H. M. Williamson, J. Thorburn, } *Hon. Secs.*

184, Oxford Street, Manchester, Dec. 27th, 1859.

Medical News.

BIRTHS, MARRIAGES, DEATHS, AND APPOINTMENTS.

* *In these lists, an asterisk is prefixed to the names of Members of the Association.*

BIRTHS.

Of sons, the wives of—

*Birch, S. B., M.D., Upper Kensington Gore, on Dec. 24, 1859.

Brown, Richard, M.D., Brighton, on Dec. 29, 1859.

McDonald, D. D. McC., M.D., Surgeon-Major, at Cork, on December 30th, 1859.

Panton, Patrick, M.D., of Rodmersham, Kent, on Dec. 28, 1859.

*Thomson, George W., M.D., Hawick, on Dec. 21, 1859.

Of a daughter, the wife of—

Thomson, J. B., Esq., Surgeon, Ramsgate, on Dec. 26, 1859.

MARRIAGES.

Ardagh, the Rev. S. B., M.A., to Helena, fourth daughter of Wm. Durie, Esq., K.H., late Inspector of Hospitals, Ordnance Medical Department, at Toronto, on Dec. 6th, 1859.

Booth, J. G. Esq., Surgeon, Padiham, to Jane, youngest daughter of the late R. Turner, Esq., Shuttleworth Hall, near Burnley, on December 22nd, 1859.

Davidson, Wm. A., M.D.. King's Dragoon Guards, to Mary, eldest daughter of the late Wm. Sowter, Esq., at Derby, on December 22nd, 1859.

Kitchener, Thomas, M.D., London, to Isabel E., younger daughter of the late Hugh De Carteret, Esq., of Colomberie, Jersey, on December 20th, 1859.

Locock, Charles B., Esq., Barrister, eldest son of Sir Charles Locock, M.D., to Fanny Bird, second daughter of the Rev. Thos. Pitman, Vicar of Eastbourne, on Dec. 27th, 1859.

Smith, Charles S. Esq., Surgeon, of Burbage, Wilts, to Margaret T., youngest daughter of the Rev. F. Tebbutt, of Hove, Brighton, on December 27th, 1859.

*Watkins, John W., M.D., Newton-le-Willows, to Harriett B., eldest daughter of the late Richard Hayes, Esq., Mornington Road, Regent's Park, on December 28th, 1859.

DEATHS.

Beddome, John R., M.D., at Romsey, on December 26, 1859.

Couch. On December 27th, 1859, aged 10 months, William O., infant son of W. O. Couch, Esq., Surgeon, Islington.

Evans. On December 21, 1859, Alfred W. A., eldest surviving son of B. Evans, Esq., Surgeon, Brixton.

Furber. On Dec. 25th, 1859, aged 22, Mary Eliza, youngest daughter of George Furber, Esq., Surgeon, late of Malpas.

Hawkins. On December 27th, 1859, at 10, Montague Place, Bryanstone Square, aged 84, Jane, widow of Anthony M. Hawkins, M.D., of Upper Brook Street.

Kane. On December 23rd, 1859, at Lower Norwood, aged 3, Ella Marcia, youngest daughter of Matthew Kane, M.D., Madras Army.

Kenny, Bernard, M.D., at Hong Kong, on Nov. 2, 1859.

Montgomery, William F., M.D., in Dublin, on Dec. 31, 1859.

Ryan, Samuel, Esq., Surgeon, at 91, Leman Street, aged 50, on December 31st, 1859.

Scott, James, M.D., Deputy-Inspector of Hospitals and Fleets, at Musselburg, on December 20th, 1859.

Steele. On January 1st, aged 3 years, Edward, second son of *H. B. Steele, Esq., Stoke Ferry, Norfolk.

Wills, W., Esq., Rotherhithe, aged 59, on Dec. 26, 1859.

APPOINTMENTS.

Brown-Séquard, E., M.D. } as Physicians to the National Hos-
Ramskill, J. S., M.D. } pital for the Paralysed & Epileptic.

Down, J. Langdon H., M.D., as Assistant-Physician to the London Hospital.

Sanderson, J. B., M.D., as Assistant-Physician to the Hospital for Consumption, Brompton.

Scurrah, John D., M.D., as Physician to the Islington Dispensary.

PASS LISTS.

ROYAL COLLEGE OF PHYSICIANS OF LONDON. At the Comitia Majora, held on Dec. 22nd, 1859, the following gentlemen, having undergone the necessary examination, were admitted members of the College:—

BRIDGES, John Henry, M.B., Victoria Square, Pimlico
DE GRAVE, John Francis, M.D., Fetcham
LIVEING, Edward, M.B., Park Terrace, Highbury

APOTHECARIES' HALL. LICENTIATES admitted on *Thursday, December 22nd*, 1859:—

CUMPSTONE, W., Market Rason
FIRTH, J. T. F., Bermondsey
HAYWARD, John R. S., Lodway, Bristol
HOYLE, R. E., Heighington
LUMSDEN, William, Hull
PROUT, Frank, Yalding
PUGH, Hugh L., Dolgellan
TEBAY, Michael J., Eastwell, Melton Mowbray
TROTTER, C. J., Holmfirth
WIGG, Thomas C., London

The following gentlemen also, on the same day, passed their first examination:—

FULLER, Wm. F., Bridgewater
LOMAS, H. W., Swinton Street
OWENS, Henry, Croydon
TANNER, Robert, Ledbury
WILLIAMS, John, Doncaster

As assistants—

BARKWAY, Walter F., St. Bartholomew's Hospital
LOWE, John, Greenwich

PROSECUTION UNDER THE MEDICAL ACT.

THE following case was tried at the Liverpool Police Court on December 21st, 1859, before J. S. Mansfield, Esq., Stipendiary Magistrate. Mr. A. B. Steele, Secretary to the Liverpool Medical Registration Association, was the prosecutor; and Mr. John Hamilton the defendant. Mr. Deighton, barrister, appeared for the prosecution, and opened the case. It appeared that on the 29th November, 1859, a woman, named Margaret Caldwell, was ill, and her husband proceeded to the residence of the defendant, and his place of business, to ask him to visit her. He (defendant) told her husband he would come, and he went to his house. He charged 1*s.* 6*d.* for the visit. He told Caldwell he was surgeon. Having looked at the woman, he gave instructions, and said he would call again. The woman died that night. Next day, her husband called upon him in relation to the burial, and the defendant undertook to give him a "medical certificate" of the cause of death, which was in these terms:—"I hereby certify that I attended Margaret Caldwell, late of Grafton-street, that died the twenty-ninth day of November. *Immediate cause: Effusion of blood on the brain, produced by excess in drinking rum. Signed*—J. Hamilton. *Profession*—Surgeon of the Medical College, Boston, U.S. *Residence*—94, Mill Street. 30th day of November, 1859." There was no doubt the defendant had assumed a name and description implying that he was registered under the Act referred to; that he falsely called himself a surgeon, and had incurred a penalty of £20.

Mr. A. B. STEELE said: I am Hon. Secretary to the Liverpool Medical Registration Association; I produce a copy of the *Medical Register*. I have carefully examined it, and I do not find the name of John Hamilton (the defendant) on it. The witness was not cross-examined.

JAMES CALDWELL: I am a boiler-maker, and reside at 167, Grafton Street, in Liverpool. I know Mr. Hamilton (the defendant); I called at his shop, in Mill Street, to ask him to see my wife; he attended her the same day; he charged 1*s.* 6*d.* for going to see her; I got medicine from him; I paid him, for attendance and medicine, 7*s.* 6*d.*; he told me what to do, and she died at 11 on the same night (the 29th November); I went to him again; I got a paper from him; I went to him about the burial; I did not look at the paper, but I took it and folded it up, and went to the registrar of deaths; I handed him the same paper I got from the defendant; he told me he was a surgeon; I heard him say he was a Surgeon of the College of Boston, United States. The certificate was produced.

HENRY BUCKMASTER, registrar of deaths for Toxteth Park district, in which Grafton Street is situated, identified the certificate.

Mr. MANSFIELD: It appears to me doubtful whether this paper sustains a charge of having violated the Act. The section seems loose, though its intention may be plain enough. The question is: has he implied that he is registered under the Act.

Mr. HUSBAND (who appeared for the defendant): That is what we say.

Mr. DEIGHTON: I think, myself, the Act is very loose, and my opinion on reading it was like yours. But there is evidence of his calling himself a surgeon.

Mr. MANSFIELD: He calls himself a surgeon; but he does not hold out that he is registered under this Act; this certificate rather negatives the inference. Mr. Thomas, the bone-setter, and others not registered, do certain things, and no doubt many do good; but they do not violate the law.

Mr. DEIGHTON: The section says that no one shall hold himself out to be a physician or doctor of medicine, or licentiate in medicine, or surgeon or bachelor in medicine, or general practitioner, or any name implying——

Mr. MANSFIELD: The only disqualification seems to be that the person practising is not registered, and shall not imply that he is. Does the evidence show he has?

Mr. DEIGHTON: The question is whether he is not acting as a surgeon by giving that certificate. He is not registered under the Act.

Mr. MANSFIELD: Does he say so? I think not.

Mr. DEIGHTON: There is another case against him.

ELIZABETH KENYON: I know Hamilton (the defendant); my husband was ill on the 8th of December instant, and I went to defendant's shop, to ask him to come and see him; he came, and ordered me what to do; he said he was a surgeon; he gave a certificate (paper handed to witness, who identified it); he said he was a surgeon of Boston College; he charged for his visits (certificate not put in; the following is a literal copy:—December 8, 1859. "I certify that J. Kenyon is unable to attend his *imployment*, in consequence of *an inflanation* of the *plura*".)

Mr. HUSBAND: It is the same case. He called himself a surgeon; he did not kill anybody?

WITNESS: I believe he would have killed me, had I taken his medicine. (*Laughter.*) I took one dose, and was laid up in bed from it, several people knows that. (*More laughter.*) Witness was not further examined. The summonses were dismissed.

Mr. DEIGHTON: I am instructed to ask your worship to grant me a case in this matter, to have the opinion of a higher tribunal.

Mr. MANSFIELD: Certainly, there seems no doubt that the Act has been evaded; and the opinion of a higher court should be taken.

Mr. HUSBAND: Not at all.

Mr. MANSFIELD: The intentions of the framers of the Act seem to be evaded.

Mr. HUSBAND: There is much misapprehension as to the intention of the Act. There has been no evasion; it all arises from not properly reading the Act.

Mr. DEIGHTON: If my friend shows me any section of the Act, such as he seems to find in it, I shall be obliged. I have not found any.

Mr. HUSBAND: The intention of the Act is not at all what it is said to be. People mistake it. (*Laughter.*)

Case granted, as required.

INDIAN MEDICAL SERVICE: WRITTEN EXAMINATION, DECEMBER 1859.

In determining the relative merits of the candidates, so far as they can be ascertained from answers to printed questions, regard will be had both to the number of questions answered, and to the accuracy and completeness of each answer. But it is not expected that all the questions will be fully answered by every candidate. For they are not only intended for ascertaining whether each candidate is qualified for an appointment, but for testing, by both their number and their difficulty, the relative abilities of the best candidates,—a design which is essential to a competitive examination, and which cannot be fulfilled unless some questions are asked to which only the best candidates can give good and complete answers.

Natural History, etc. Monday, December 12, 1859.—10 to 1 o'clock. Dr. HOOKER. Answer five or more of the following questions:—1. Enumerate the vegetable anthelmintics, their scientific names, natural orders, and the countries whence they are obtained. 2. What are the principal substitutes for tea? Give their respective qualities and properties. 3. Enumerate the principal plants from which fermented drinks are prepared in various parts of the world. 4. What are the medical properties of the officinal plants in the natural order compositæ? Give their names, and the tribes to which they belong. 5. What are the chief modifications of the flowers

of grasses? 6. What natural orders of plants are characterised by an irregular monopetalous corolla with two to four epipetalous stamens? 7. Enumerate the integuments and contents of a dicotyledonous seed; and describe the process of germination. 8. What is meant by rotation of crops? and upon what physiological principles is it based? 9. What are the tribes of the class aves? and how do they differ in structure and habits? 10. Describe the poison-apparatus of the adder, bee, wasp, and scorpion, and their mode of action. 11. Enumerate the orders of mollusca, giving an example of each. 12. What is chalk, chemically, structurally, and geologically? 13. Define tersely and accurately the terms fracture, articulation, intussusception, introversion, extrusion, adnate, polyhedral, elliptical, parabolic,—giving the derivation of each. 14. Give briefly the character and properties of proteine, fibrine, gluten, starch, caseine, elaine, stearine, and legumine. 15. What gases are given off from urinals and water-closets? and how should the evils dependent on them be avoided in hospitals?

Surgery. Monday, December 12, 1859.—2 to 5 o'clock. Mr. PAGET. 1. Describe the states named respectively "shock" and "reaction," as seen in such a case as that of a crushed limb. 2. Enumerate the chief varieties of inflammation of the testicle; and state the distinctive characters of each. 3. Give an account of secondary hæmorrhages, such as may occur after amputation, and of the best modes of treating them. 4. What ill consequences may follow dissection wounds? and what are the best means of treatment, preventive and curative? 5. What are the chief means by which, in the reduction of herniæ, the "taxis" may be assisted? and in what conditions is each of them most useful? 6. Describe the process of repair of a tendon after subcutaneous section. 7. Describe the several diseases of the eye that are connected with syphilis and gonorrhœa. 8. A man, 53 years old, while under treatment for slight stricture of the urethra, was exposed to cold damp weather, and next day had a severe rigor, followed by heat and sweating, and completely lost the power of passing urine. On each of the next two days he had similar rigors; and on the third day he was not only still unable to pass urine, but had constant straining and extreme pain in his attempts to do so. During three days more, these symptoms continued, with rigors; and there were gradually added to them, pain in the perineum and about the anus, tenderness on deep pressure in front of the anus, and heavy forcing pain referred to the lower part of the rectum. The bladder was regularly emptied with a catheter, and was not painful on pressure: the urine was generally healthy. What would you suspect to be the disease in this case? and how would you prove and treat it?

Anatomy and Physiology. Tuesday, December 13, 1859.—10 to 1 o'clock. Mr. BUSK. 1. Give a general description of the spinal column, and of the course of its ossification. 2. Describe the mode of development of a vertebra in general, indicating the exceptional cases (exclusive of the sacrum and coccyx). 3. Enumerate the various muscles, and describe their respective actions, by which the deformity witnessed in the following fractures is probably caused:—(*a*) Fracture of the neck of the femur. (*b*) Fracture of the lower end of the femur immediately above the condyles. (*c*) Fracture of the lower end of the radius (Colles's fracture). 4. Describe the arch of the aorta, the relations of its various portions, and the dissection necessary to examine it; mention also the principal variations in the position of its branches. 5. Describe the parts contained in the space bounded in front by the posterior border of sterno-mastoid, behind by the anterior border of the trapezius, and below by the clavicle. 6. Give a general account of the lymphatic and lacteal system, including the minute structure of the lymphatic vessels and glands. 7. Describe the physiological effects of the division of the vagi nerves. 8. Mention the parts in other vertebrate animals which are homologous with the human hand, or parts of it.

Medicine. Tuesday, December 13, 1859.—2 to 5 o'clock. Dr. PARKES. 1. Describe the symptoms and post mortem appearances of tubercular meningitis in children under 5 years of age. 2. Describe the alterations to which the cerebral arteries are liable: and state the possible consequences of such alterations. 3. What is the treatment of extensive double capillary bronchitis in children and adults? 4. What are the symptoms, anatomical appearances, and treatment of cirrhosis of the liver? 5. A woman, aged 56, was admitted into hospital with great œdema of the face and the upper extremities, and with immense turgescence of the cervical veins. The body and legs were entirely free from anasarca, and there was no evidence of renal disease. The heart's sounds were feeble but without murmur. There was very decided dulness, with slight pulsation, without murmur, under the first bone of the sternum. The pulsations of the radial arteries were equal in both wrists. Comment on these symptoms, and state what diseases would afford a reasonable explanation of them. Mention also any symptoms (not given above) which you suppose may have been present. 6. Describe the various forms of polypus of the uterus, their diagnosis and treatment.

DISGRACEFUL CONDUCT OF A NAVAL COMMODORE. We have heard with no small regret that the ship now bearing the broad pendant of the senior officer on the Australian station, is more unpopular than the ship which the *Iris* relieved. We hoped better things of Commodore Loring; but presuming the accompanying extract from a private letter which has reached us, duly authenticated, to be true, the gallant officer in command would appear to be taking a very extraordinary course. The letter is dated October 9th:—"The surgeon of the *Cordelia*, D. H. Wright, M.D. (who was a very superior person and much esteemed by all), died, the night before last, from consumption, and was buried to-day. Commander Vernon, of the *Cordelia*, called on the Commodore yesterday, and acquainted him of the death of his surgeon, and was answered, 'Oh, never mind him, we can get a hearse and bury him after you are gone': and Commander Vernon received orders to sail the same evening for the Feejees. However, the officers of the Artillery heard of this; and, as the Commodore declined to do anything, they procured a gun-carriage and horses, and their band. The colonel of the 12th regiment sent a large firing party, and all the officers who were not on duty, from the colonel commanding the garrison down (about nineteen in all) attended. The naval Commodore in command "pooh-poohed" the whole thing, and actually went to a *wedding party* while the surgeon was being buried. Nor was this all. He would not allow both the surgeon and assistant-surgeon to attend their brother officer's funeral. He compelled one to remain on board, and would not send a single blue-jacket or mariner, or in any way take official or private notice of the funeral of the naval surgeon of a ship under his command. The artillery and 12th regiments *did everything*." (*United Service Gazette*, December 24th, 1859.)

HULL MEDICAL REGISTRATION ASSOCIATION. The annual meeting took place at the Hull Infirmary, on December 15, 1859. The report stated that on the 18th of February last, the medical men of this town determined almost unanimously to establish a registration association in Hull; and on the 15th of April, its bye-laws were fixed, and its organisation completed. All the orthodox qualified practitioners of the town and neighbourhood were urged by circular to join, and assist in its operation; 150 such circulars were sent out, and the result was the enrolment of 44 members. Many of those to whom circulars were sent in the country, had already joined other kindred associations. The committee, until lately, did not undertake any investigation of pretended or assumed titles. The committee much regretted to find the name of an individual on the register, respecting whom the Secretary had been instructed to communicate with the Registrar, when they understood that he was seeking registration. The correspondence respecting him, both with the Registrar and the Secretary of the Bristol Association, Dr. McDonald, was read. To the latter gentleman, the thanks of the association were justly due on account of his exertion in the matter. If unable to prosecute the individual alluded to, on the ground of fraudulent registration, the committee proposed doing so in consequence of his assumption of the title of surgeon and doctor. The Secretary has been instructed to warn two individuals in Hull, of their illegal assumption of medical titles; at the same time threatening legal proceedings. The parties in question, however, immediately removed such titles from their premises, etc. The Secretary was subsequently requested to advise them not to pretend, under any circumstances, to be qualified men, as the committee would certainly prosecute if any instance of the kind came under their notice. The case of a neighbouring medical practitioner, with an extensive practice (and whom some of the members had been in the habit of meeting in consultation), had been laid before your committee by the Secretary. This individual was not registered, and your committee intended thoroughly to investigate the case, and, if necessary, to prosecute him. Through the courtesy of the Registrar, their Secretary had been supplied with a monthly Appendix to the Register, so that the name of every individual registered within the month might be readily

found. The expenses of the past year had necessarily been large in the printing and stationery department, and consequently, there was a balance due to your Treasurer. The committee recommended that in future the subscription of the members be five shillings, instead of two shillings and sixpence annually. The following gentlemen were elected officers for the ensuing year:—*President*, Robert Hardey, Esq.; *Vice-President*, J. P. Bell, M.D.; *Other Members of Committee*, R. M. Craven, Esq., J. H. Gibson, Esq., K. King, M.D., H. Munroe, M.D.; *Hon. Secretary and Treasurer*, H. Carnley, M.B.

HEALTH OF LONDON—DECEMBER 31ST, 1859.

[*From the Registrar-General's Report.*]

	Births.	Deaths.
During week ..... { Boys..1035 / Girls..923 }	1958	.. 1677
Average of corresponding weeks 1849-58	1595	.. 1456

Among the causes of death were—bronchitis, 278; pneumonia, 151; asthma, 21; phthisis, 154; small-pox, 46; scarlatina, 65; diphtheria, 13; hooping-cough, 50. The deaths from pulmonary diseases (exclusive of phthisis) were 470, being 176 above the corrected average. Of 66 persons who died at the age of 80 and upwards, 6 were nonagenarians. Of bricklayers, 4 died in the week, of bricklayers' wives, 0, of bricklayers' children, 8; of carpenters, 8 died, of carpenters' wives, 3, of carpenters' children, 14; of masons' wives, 1, of masons' children, 2; of painters, 9 died, of painters' wives, 5, of painters' children, 6; of plasterers, 3 died, of plasterers' wives, 3, of plasterers' children, 5.

Barometer:

Highest (Sat.) 29·580; lowest (Mon.) 28·799; mean 29·32 in.

Thermometer:

In sun—highest (Sat.) 56·5 degrees; lowest (Sun.) 43·0 degrees.

In shade—highest (Sat.) 56·5 degrees; lowest (Tues.) 34·0 degrees.

Mean—45·3 degrees; difference from mean of 43 yrs. + 8·4 degrees.

Range—during week, 22·5 degrees; mean daily, 8·8 degrees.

Mean humidity of air (*saturation* = 100), 93.

Mean direction of wind, S.W.—Rain in inches, 0·97.

TO CORRESPONDENTS.

A QUESTION OF PRECEDENCE. The following case has been submitted to us. A.B. has been a *Member* of the Royal College of Surgeons since February 1826, and a Licentiate of Apothecaries' Hall since May 1825: he became a Fellow of the College in 1856 (*by payment*), and since then has practised exclusively as consulting surgeon.

C.D. became a Member of the Royal College of Surgeons and Licentiate of the Apothecaries' Hall in 1847, and is now in full general practice.

Is there any difference between the two gentlemen as to preference? Does the Fellowship take priority of standing, or rank before Member?

In answering these questions, we do not clearly see whether we are to regard the first both as applying to professional skill, or, as the second, to simple precedence in the profession. If the first question relates to professional skill, then, *à priori*, A.B. would have the first place: because, by his having been longer in the profession, he may be supposed to have enjoyed and profited by more opportunities than C.D. of acquiring practical knowledge. But it is possible that in this matter C.D. may be superior; and, therefore, as we know nothing of the relative merits of the parties, we can only give a qualified answer. As to the matter of precedence, a Fellow of a College takes rank before a Member, on the ground that his possession of the title of Fellow implies that he has obtained a recognition of professional attainments of a superior order. It is by no means to be supposed that all Fellows are absolutely superior to all Members, any more than that all Doctors of Medicine are superior in attainments to all Bachelors of Medicine. The fact, however, of having a title which *a priori* implies superior attainments gives precedence to the holder.

Members should remember that corrections for the current week's JOURNAL should not arrive later than Wednesday.

POSTAGE OF MANUSCRIPT AND PRINTED MATTER.

Any amount of manuscript or printed matter, singly or together, provided it contains nothing in the form of a written letter, is transmitted through the post, in packets *open at the ends*, at the following rates: not exceeding 4 ounces, one penny; above 4 and not exceeding 8 ounces, twopence; above 8 ounces and not exceeding 1 pound, fourpence; for every additional half-pound or under, twopence.

ANONYMOUS CORRESPONDENTS should always enclose their names to the Editor; not for publication, but in token of good faith. No attention can be paid to communications not thus authenticated.

Communications have been received from:—MR. ATHOL A. JOHNSON; MR. ERICHSEN; MR. F. H. HARTSHORNE; MR. PEARSON; SIR CHAS. HASTINGS; DR. B. W. RICHARDSON; DR. T. H. BARKER; MR. G. MALLETT; DR. WM. BUDD; MR. DIX; MR. HOLTHOUSE; DR. O'BRYEN; MR. W. M. CLARKE; MR. F. JORDAN; DR. C. H. JONES; DR. H. CARNLEY; MR. THOMPSON; DR. W. CAMPS; DR. J. W. WATKINS: MR. W. E. CASS; DR. PURSELL; MR. R. S. FOWLER; DR. WHYTEHEAD; DR. J. B. GILBERTSON; MR. I. HARRISON; DR. J. B. PITT; DR. FAYE; DR. P. H. WILLIAMS; M.R.C.S., L.S.A., and a MEMBER OF THE BRITISH MEDICAL ASSOCIATION; and DR. BIRCH.

BOOKS RECEIVED.

[* *An Asterisk is prefixed to the names of Members of the Association.*]

1. On the Injurious Effects of Mercury in the Treatment of Disease. By S. O. Habershon, M.D. London: Churchill. 1860.
2. Essays in Medical Science. I. On the Nature of Inflammation. II. On the Encephalic Circulation, and its Relation to the Physiology of the Brain. By James Cappie, M.D. Edinburgh: Sutherland and Knox. London: Simpkin, Marshall, & Co. 1859.
3. Religious Revivals in Relation to Nervous and Mental Disorders. By J. J. Stevenson Bushnan, M.D. London: Churchill. 1860.

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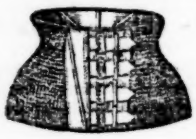

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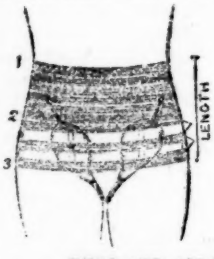

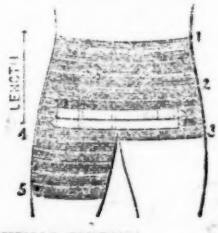

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